

THE
SECOND VOLUME
OF THE
Gardeners Dictionary:

WHICH
Completes the WORK.

BY
PHILIP MILLER, F. R. S.

*Gardener to the Worshipful Company of APOTHECARIES,
at their Botanic Garden at Chelsea.*

L O N D O N:

Printed for the A U T H O R;

And Sold by CHARLES RIVINGTON, at the *Bible and Crown*
in *St. Paul's Church-Yard.*

MDCCXXXIX.

TO THE
RIGHT HONOURABLE
THE
Earl of *BURLINGTON*,
&c. &c. &c.

This SECOND VOLUME
OF THE
Gardeners Dictionary

IS
Most Humbly Inscribed;

BY
His LORDSHIP'S

Most Obedient

Humble Servant,

Philip Miller.

RIGHT HONOURABLE
THE
Earl of BURLINGTON

&c. &c. &c.
This SECOND VOLUME
OF THE

Gardener's Dictionary

Most Humbly Inscribed:

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Philip Miller.



T H E

P R E F A C E.

TH E Publishing of this Second Volume of the Gardeners Dictionary, in a few Years after the First, may possibly seem to require an Apology to the Publick, who have so kindly received my former Volume, lest my omitting several Things in that, should be interpreted as a Design, in order to furnish Matter for another: But this I must declare was very far from my Thoughts; for at the Time when that Volume was compiled, I had room, as I thought, to apprehend, that it might not be so well received, after so many Books which had appeared on the same Subject in the Compass of a few Years before. Therefore I purposely omitted many Plants, which were not commonly cultivated in Gardens, lest the Book should swell to such a Bulk, as might be an Obstacle to the Sale, by making it too dear for the generality of Readers. Some Plants had also escaped my Notice at that Time, of which I was soon informed by some of my Friends, who advised me to draw up an Account of their Culture, and to publish them in a small Piece separately, rather than to add them in any future Edition, that the Purchasers of the former Volume might not be injured. And this being agreeable to my Resolution and Promise to the Publick, in my first Edition, I the more readily complied with it, and accordingly published them as an Appendix to it, some Years ago. But as there has not been a proportionable Demand for them (few Persons caring to purchase such a small Piece, after their Books were bound, as being subject to be mislaid or lost) so it is to be supposed that they will still be new to a great many Persons who purchased the first Volume.

The PREFACE.

Soon after the Publication of the Appendix, I received several Letters from Persons of great Consideration; in which they took Notice, that as the *Gardeners Dictionary* was now more generally consulted than any other Book on the Subject, so the omitting of any useful Plant (however inconsiderable it might appear to some Persons) was thought a Deficiency in the Work. By other Persons I was informed, that as I had treated of several Things relating to Agriculture in the former Volume, so it would be acceptable to the Publick, if I were to communicate such other Observations or Experiments as I should have made relating to that Subject. For these Reasons I employed my leisure Hours in minuting down from my Papers all those Things which might answer both Intimations, and be particularly useful to such Persons as were curious in making Improvements in Agriculture.

These Articles, together with the several new Plants which I found it necessary to add, would have too much swelled the first Volume, had I been disposed to add them to it, as, but for that Reason, and the Justice due to the Purchasers of the first Edition thereof, I should gladly have done in the last Impression of that Piece: And having moreover several Catalogues and other Matters to add, at the Request of divers worthy and judicious Friends, I thought it best, on all these Considerations, to publish all together as a Second Volume, which should complete my general Design, and yet in no sort depreciate the First.

These Catalogues contain, first, the Names of the several Sorts of Trees and Shrubs which will thrive in the open Air in England, ranged according to their several Growths: by the Knowledge of which, such Persons as are not well acquainted with the Heights to which they usually rise, may know how to dispose of them in Gardens, and other Plantations, so as to render them most ornamental.

The several hardy Flowers, which will thrive in the open Borders, and do not require Covering in Winter, are also, in the next Place, ranged in a Catalogue, so that any Persons may easily select such of them as are for their Purpose.

The next Catalogue is that of such flowering Plants as will thrive under Trees in Wildernesses; which I have often been solicited to draw up, as what would be of no small Use and Pleasure to many curious Improvers.

To these are added Catalogues of tender exotic Plants, which are ranged according to the several Degrees of Heat they require in Winter; whereby any Person may be easily instructed how to dispose them: for want of knowing which, many have placed some of the most tender exotic Plants, in common Green-houses, amongst Orange-trees and Myrtles, where they have been soon destroyed.

I have

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I have also added a Catalogue of such of the Plants as are directed to be used in Medicine, as will thrive in the open Air in England; so that those who are desirous to cultivate them, may know which will thrive with them to Advantage; and I have distinguished those of them which grow wild in England, in such a manner that any Person may know in what Soils and Situations they may be found; which will also be a Direction for their Culture, and is what many Persons, especially such as live at a Distance from London, and have frequent Occasion to make use of these Plants, have been desirous of knowing.

In this Volume, I have also corrected some Mistakes which had passed in the former: But as to the essential Parts of Gardening, I do not find, upon the most diligent Observation, that I have any Alterations to make; especially in the Management of Fruit-trees, in which some Persons differ from me at present; but from upwards of twenty Years Practice, I am convinced, that more Success is not to be expected, in any other Method of Pruning or Management, than that which is laid down in the former Volume of the Gardeners Dictionary: for although, by a particular Method of Pruning, it is possible to have more Fruit for two or three Years; yet this will so weaken the Trees, that many times they are never to be recovered; and those which are not so far reduced, cannot, with the best Management, be brought into good Order under several Years. So that where the future Welfare of Trees is consulted, a moderate Share of Fruit is much to be preferred; which being better nourished, are also always of a larger Size, and generally better flavoured; Considerations of much greater Estimation to all curious Persons, than such a Plenty as depreciates the Fruit, and exhausts the Vigor of the Tree.

In treating on the Culture of the several Sorts of Plants herein mentioned, I have put down faithfully what is found by Experience to be the best Method; and if in this Article it should be thought by any Persons, that I have been too prolix, or that many of the Plants which I have enumerated, are to be met with but in few Gardens, I hope they will excuse me, when they consider that this is intended as a System of Gardening, in which it would be thought, by the judicious Part of Mankind, a much greater Fault to have omitted any Plants which are now cultivated in England.

The several Improvements which have of late Years been made in the Culture of exotic Plants, I have here inserted, particularly of the Anana's, which is now become common in most Parts of England; so that, from the various Experiments which have been made in its Culture, the Fruit of this Plant has been greatly improved, both in the Size and Flavour; whereby it is brought to a Degree of Perfection, very little inferior to that in the Countries of its natural Growth. And as there have been several Methods practised in cultivating these Plants, so there have also been several Contrivances

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vances of Stoves, in order to lessen the Expence, and to bring the Fruit to a larger Size: for which Reason I have inserted Plans of two Sorts of Stoves, which are found to answer these Purposes best; and have given such plain Directions for their Structure, as, it is hoped, cannot be mistaken, by any Person the least conversant with such Sort of Buildings.

I have also been pretty full in my Directions for building and managing of Hot-walls, either for accelerating the ripening of Fruit early in Summer, or for bringing such late-ripe Fruit to Perfection; which cannot be obtained in this Country without such artificial Helps: and as this Part of Gardening is at present much in Request, so I have been the more careful to render the Instructions for it as plain as possible, that there should not be any Mistake made by those who are desirous to put them in Practice.

In the whole of this Work, I have endeavoured to lay down the Instructions given, in so plain and intelligent a Manner, as may make them easily understood by Persons of all Capacities, who will but diligently apply themselves to the practic Part: for all which Reasons, I presume to hope, that this additional Work may be found not altogether unworthy of the Indulgence of those kind Persons who have so favourably received my former Performance.



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THE Gardeners Dictionary.

VOL. II.

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ABIES; The Firr Tree.

The additional *Species*, which were omitted in the former Volume, are;

1. *ABIES foliis praelongis, pinum simulans.* *Raii Hist.* Firr Tree, with long Leaves, resembling those of the Pine Tree.

2. *ABIES orientalis, folio brevi et tetragono, fructu minimo, deorsum inflexo.* *Tourn. Cor.* Eastern Firr Tree, with short square Leaves, and small Fruit hanging downward.

3. *ABIES major Sinensis, pectinatis taxifoliis subtus cæsis, conis grandioribus sursum rigentibus, foliorum et squamarum apiculis spinosis.* *Pluk. Amalth.* Great Firr-tree of China, with Yew Leaves, large Cones growing upright, and the Points of the Leaves prickly.

4. *ABIES maxima Sinensis, pectinatis taxifoliis, apiculis non spinosis.* *Pluk. Amalth.* Greatest China Firr Tree with Yew Leaves, not prickly at their Points.

These Sorts are, at present, very rare in England; the first was formerly growing in the Garden of Mr. Edward Morgan in Westminster, a Branch of which Tree was given to Mr. Ray, by Mr. Doody, who was a very curious Botanist. The Leaves of this Tree are much longer than those of any other kind of Firr yet known, but it hath not as yet produced any Cones in this Country.

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The second Sort was discovered in the *Levant*, by Dr. *Tournefort*, who sent the Cones to the Royal Garden at *Paris*. This Kind of Firr is very common in the Mountains of the *Archipelago*, from whence the Cones may be easily procured.

The other two Sorts are very common in *China*, from whence I have received Seeds and Branches of both kinds, but the Seeds having been taken out of their Cones before they were brought over, had dried up, and lost their Germ, so that none of them grew; therefore, whoever is desirous to propagate any of the Coniferous Trees, should have the Cones gathered when ripe (before they open, and let out the Seeds) in which the Seeds will continue fresh a long Time: For if the Seeds are taken out of the Cones, they will not retain their growing Quality, so as to be transported from one Country to another.

All the Sorts of Firrs are propagated from Seeds, which may be sown after the manner directed in the former Volume of this Dictionary. The only Difference to be observed in their Culture, is, to shelter such Sorts as come from a warmer Country, for two or three Winters, while they are young; after which Time all the Sorts of Firrs yet known, will thrive in the open Air in *England*; for there are none of them Natives of very hot Countries, and those which do grow in Countries ten or fifteen Degrees more to the South than

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England, are always observed on Hills and Mountains, where they are exposed to sharp Frosts in Winter.

Most of the Firrs yet known delight in a pretty strong deep Soil; tho' they will grow tolerably well on a light dry Soil for a few Years; but it has been often observed, That when the Trees are arrived to the Height of twenty or thirty Feet, on such a Soil, they lose their Verdure, and their under-Branches begin to decay; after which Time they seldom make any farther Progress, and many times a whole Plantation will suddenly decay. Nor will any of the kinds of Firr thrive in the Smoak of London: I don't remember to have seen one of these Trees of any Magnitude near London, tho' there are many of them yet remaining in some old Gardens, which have been many Years standing, but are not above twenty Feet high, and in a very declining State.

The common Firr, which is a Native of Sweden and Norway, always grows in the Plains and low Grounds, where they have a great Depth of strong loamy Soil, in which Places they arrive to a very great Height, tho' they are almost buried in Snow for several Months in Winter, so that these Trees might be cultivated in the low strong Lands in the North of England, and in Scotland, where they would greatly improve such Estates.

The several Sorts of Firrs, which are Natives of America, do generally grow upon low springy Soils, and upon a light Ground, and such of them which have been propagated in England, do thrive exceedingly upon low, light, moist Soils; whereas those which have been planted on a drier Soil, have made very little Progress, and in very dry Seasons many of them have quite perished, where they were not duly supplied with Water. These are all very hardy in respect to Cold, so that they may be planted into the full Ground, when they are about a Foot high, into the Places where they are designed to remain.

The Silver Firr will thrive on a rocky Soil extremely well, provided the Rock be not too dry, in which Case they are very subject to die in very dry Seasons, as hath been the Fate of some Plantations of these Trees a few Years since, which were grown to a large Size. The largest Trees of this kind which I have seen growing, were at Farley in Hampshire; these were above eighty Feet high, and from ten to eleven Feet in Circumference. They grew in a strong red clayey Soil, and upon Enquiry I found they had been planted near fourscore Years.

ABROTANUM; Southernwood.

3. *ABROTANUM mas angustifolium majus*. C. B. P. Greatest narrow-leav'd Southernwood.

4. *ABROTANUM latifolium inodorum*. C. B. P. Broad leav'd Southernwood, without Scent.

5. *ABROTANUM mas angustifolium incanum*. C. B. P. Hoary narrow-leav'd Southernwood.

6. *ABROTANUM campestre, cauliculis albicantibus*. C. B. P. Fine leav'd wild Southernwood, with whitish Stalks.

7. *ABROTANUM campestre, cauliculis rubentibus*. C. B. P. Fine leav'd wild Southernwood, with reddish Stalks.

8. *ABROTANUM campestri simile Tingitanum*. H. L. Tangier Southernwood resembling the wild Sort.

9. *ABROTANUM campestre incanum, carlinae odore*. C. B. P. Hoary Field Southernwood, with a Smell like the Carline Thistle.

10. *ABROTANUM humile, corymbis majoribus aureis*. H. R. Par. Dwarf Southernwood, with larger Golden Flowers.

11. *ABROTANUM Hispanicum, absinthii Pontici folio*. Tourn. Spanish Southernwood, without a Pontick Wormwood Leaf.

12. *ABROTANUM Hispanicum maritimum, folio crasso splendente et rigido*. Tourn. Spanish Sea Southernwood, with a thick, shining, stiff Leaf.

13. *ABROTANUM mas ex Surinam, molli birsutia canescens*. Pluk. Almag. Hoary Male Southernwood from Surinam.

14. *ABROTANUM elatius subincanum, foliis creberrimis, secundum caulem in metæ formam fastigiatis*. Pluk. Almag. Taller hoary Southernwood, with frequent Leaves gathered into a kind of Pyramid.

15. *ABROTANUM orientale annuum, absinthii minoris folio*. Tourn. Cor. Annual Eastern Southernwood, with a Leaf of the lesser Wormwood.

16. *ABROTANUM orientale, chamæmeli folio*. Tourn. Cor. Eastern Southernwood, with a Camomile Leaf.

17. *ABROTANUM Africanum, foliis argenteis angustis, floribus spicatis, capitulis copioso tomento donatis*. D. Sberard. Raii Supp. African Southernwood, with narrow Silver Leaves, spiked Flowers, and very woolly Heads.

18. *ABROTANUM Africanum, foliis argenteis angustis, floribus umbellatis, capitulis tomentosis*. Raii Supp. African Southernwood, with narrow Silver Leaves, umbellated Flowers, and woolly Heads.

The third, fourth, and fifth Sorts may be propagated by Slips or Cuttings, in the same Manner as hath been directed for the two former, in the first Volume. These are, at present, more rare in the English Gardens, tho' they are equally hardy with the other Sort; and may be planted for Under-shrubs, in Quarters of low growing Trees, where, by the Diversity of their Leaves, they will afford an agreeable Variety.

The sixth and seventh Sorts grow commonly in Germany, Italy and Narbonne, by Waysides, and in barren Places, and are also found in England by the Way-side from Newmarket to Lyn, near a Village called Elden. These seem to be but Varieties from each other, and only differ in the Colour of their Stalks. They are seldom preserved in Gardens, unless it be for Variety, by some Botanists. Whoever is desirous to have these Plants, may easily obtain them from the Places of their

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their Growth, either the Plants, or the Seeds, but the Seeds should be sown soon after they are ripe, for they being very light, will lose their growing Quality, if they are kept long out of the Ground. These Plants seldom continue above three or four Years, when transplanted into Gardens, so that new ones should be raised from Seed to succeed them.

The eighth Sort is not so hardy as any of the former, for being a Native of warm Countries, it requires to be sheltered from the Frost in Winter. This may be propagated as the former, but should be kept in Pots, that they may be placed under a Frame in Winter, where they should have as much free Air as possible in mild Weather, but in hard Frosts may be covered with Glasses and Mats to secure them.

The ninth Sort should be treated in the same Manner as the sixth or seventh Sorts, and is equally hardy. These will continue much longer on a dry barren Soil, than when they are planted in a rich Garden Earth.

The tenth, eleventh, twelfth and sixteenth Sorts, may be propagated by Seeds, or from Slips and Cuttings: If from Seeds, they should be sown on a warm Border of dry Earth early in the Spring, and when the Plants are come up, they must be constantly kept clear from Weeds, which if suffered to grow, would soon over-bear and destroy the young Plants. When the Plants are about four Inches high, some of them may be planted into Pots, that they may be removed under Shelter in the Winter; and the others may be transplanted into a warm Border, observing to shade and water them until they have taken new Root; after which time, they will require no farther Care, but to keep them clear from Weeds. These Plants are sometimes destroyed by severe Frost, while they are young, but afterwards they will endure the Cold of our ordinary Winters extremely well; especially if they are planted on a dry lean Soil. If you propagate these by Slips or Cuttings, they must be treated in the same Manner as hath been directed for the common Sort.

The thirteenth and fourteenth Sorts are tenderer than any of the before-mentioned. These may be propagated either by Seeds, or from Slips, as the former; but they must be kept in Pots, and require a good Greenhouse in Winter, where they should be placed to enjoy as much free Air as possible in mild Weather.

The fifteenth Sort is an annual Plant, which rarely produces good Seeds in this Country. The surest Method to obtain good Seeds is to raise the Plants towards the latter part of Summer, and preserve the Plants thro' the Winter, which will cause them to flower early the following Summer, so that they will have time to perfect their Seeds; whereas those which are raised in the Spring, will flower late in the Autumn, and the cold Weather will come on before they have time to ripen Seeds.

The seventeenth and eighteenth Sorts do rarely produce good Seeds in Europe, but they may be easily propagated by Cuttings or Slips,

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which should be planted in Pots filled with light fresh Earth, and plunged into a very moderate hot Bed, observing to water and shade them until they have taken Root, after which time they should be inured to bear the open Air by Degrees; then they should be taken out, and placed where they may have the morning Sun, and sheltered from the strong Winds, in which Situation they should remain till October, when they should be removed into the Green-house, and placed where they may enjoy as much free Air as possible in mild Weather, and must be frequently refreshed with Water; but they must be secured from Frost, otherwise they will be destroyed.

ABSINTHIUM; Wormwood.

6. ABSINTHIUM *Ponticum montanum*. C.B.P. Common Mountain Wormwood.

7. ABSINTHIUM *Ponticum Creticum*, *grati odoris*. C. B. P. Candy Pontick Wormwood, of a pleasant Smell.

8. ABSINTHIUM *Ponticum tenuifolium*, *caulibus purpurascens*, *foliis supina parte viridioribus*. C. B. P. Narrow-leav'd Pontick Wormwood, with purplish Stalks, and Leaves greener on their under Side.

9. ABSINTHIUM *Ponticum tenuifolium Austriacum*. C. B. P. Austrian Wormwood.

10. ABSINTHIUM *Ponticum*, *repens vel spinum*. C. B. P. Creeping Pontick Wormwood.

11. ABSINTHIUM *maritimum*, *foliis superioribus in aliquot lacinias divisis*. C. B. P. Sea Wormwood, with the upper Leaves divided into some Jags.

12. ABSINTHIUM *Seriphium Germanicum*. C. B. P. German Sea Wormwood.

13. ABSINTHIUM *Seriphium Belgicum*. C. B. P. Belgick Sea Wormwood.

14. ABSINTHIUM *maritimum*, *Seriphio Belgico simile*, *latiore folio*, *odori grati*. Pluk. Sea Wormwood, resembling the Belgick Wormwood, with a broader Leaf, and a pleasant Smell.

15. ABSINTHIUM *Seriphium Gallicum*. C. B. P. French Sea Wormwood.

16. ABSINTHIUM *Santonicum Gallicum*. C. B. P. French Wormwood.

17. ABSINTHIUM *Seriphium montanum candidum*. C. B. P. White Mountain Wormwood.

18. ABSINTHIUM *Alpinum incanum*. C. B. P. Hoary Wormwood of the Alps.

19. ABSINTHIUM *Alpinum*, *candidum humile*. C. B. P. Dwarf white Wormwood of the Alps.

20. ABSINTHIUM *Seriphium Hispanicum*, *flore oblongo*. Tourn. Spanish Wormwood, with an oblong Flower.

21. ABSINTHIUM *Halepense*, *grati odoris*, *coma delicatior*. Pluk. Wormwood of Aleppo, of a pleasant Smell, with a delicate Spike.

22. ABSINTHIUM *Africanum*, *arborescens*, *foliis vermiculato incano*. Oldenl. African Tree Wormwood, with a hoary vermiculated Leaf.

23. ABSINTHIUM *Africanum spicatum*, *foliis tenuissimis & brevissimis integris*. D. Sberard. Raii Supp. Spiked African Wormwood, with narrow short intire Leaves.

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24. *ABSENTHIUM maritimum nostras. D. Preston. Raii Supp. Scotch Sea Wormwood.*

25. *ABSENTHIUM orientale fruticosum incanum, amplo folio tenuissime diviso. Tourn. Cor.* Shrubby Eastern Wormwood, with large hoary Leaves finely divided.

26. *ABSENTHIUM orientale incanum, capillaceo folio, floribus in capitulum congestis. Tourn. Cor.* Hoary Eastern Wormwood, with a capillaceous Leaf, and Flowers collected into an Head.

27. *ABSENTHIUM orientale incanum tenuifolium, floribus luteis, in capitulum congestis & sursum spectantibus. Tourn. Cor.* Hoary narrow-leav'd Eastern Wormwood, with yellow Flowers collected into an Head, and looking upward.

28. *ABSENTHIUM orientale incanum, tanacetii folio, inodorum. Tourn. Cor.* Hoary Eastern Wormwood, with a Tansy Leaf, without Smell.

29. *ABSENTHIUM orientale tenuifolium, argenteum & sericeum flore magno. Tourn. Cor.* Eastern Wormwood, with narrow silver colour'd silken Leaves.

30. *ABSENTHIUM orientale vulgari simile, sed longe minus amarum. Tourn. Cor.* Eastern Wormwood, like the common, but far less bitter.

31. *ABSENTHIUM orientale tenuifolium incanum, odore lavendulae & insipidum. Tourn. Cor.* Hoary narrow-leav'd Eastern Wormwood, with a Lavender Smell, and insipid.

32. *ABSENTHIUM orientale tenuifolium incanum, lavendulae odore, & amarum, flore deorsum spectante. Tourn. Cor.* Hoary narrow-leav'd Eastern Wormwood, with a Lavender Smell, and bitter, with the Flower hanging down.

The twenty-fifth Sort, being a Shrub, must be propagated by Cuttings, after the Manner directed for the first Sort in the former Volume. This must be kept in Pots, that they may be removed into the Green-house in Winter, because in very severe Frost it is often destroyed, though in mild Winters it will live in the open Air, provided it is planted on a dry Soil, and in a warm Situation.

The twenty-second and twenty-third Sorts are Natives of the Cape of Good Hope; these Sorts may also be propagated by planting either Cuttings or Slips in any of the Summer Months, observing to water and shade them until they have taken Root; then they may be placed abroad amongst other Exotick Plants, where they may remain till October, when they must be removed into the Green-house, and placed with Myrtles and other hardy Plants, which require a large Share of free Air in mild Weather, and only want Protection from severe Frosts. They will require to be frequently watered in mild Weather, and should have a light fresh Soil. The twenty-second Sort will rise to the Height of seven or eight Feet; but the twenty-third Sort is an humble Plant. These seldom produce Seeds in Europe.

All the other Sorts are low Plants, which may be propagated by their Roots, many of which are apt to creep too much, so as to render it difficult to keep them within Compass. These do many of them die to the Ground in

Autumn, and rise again the following Spring. The best Season for transplanting these Plants is in March, just before they begin to shoot; they will grow in almost any Soil or Situation, but the Eastern Kinds should be planted in a warmer Place than the other Sorts. They should be planted in Beds about four Feet broad, with Paths two Feet broad between each Bed, for the more convenient cleaning them from Weeds, and for gathering the Herb for Use. The Distance which should be allowed to the Plants, ought not to be less than eighteen Inches, or two Feet, because as they are great Runners by their Roots, so they will soon meet and spread over the whole Beds. They may remain in these Beds three or four Years, and will require no other Culture, but to keep 'em clear from Weeds, and every Spring before they shoot, to cut off their dead Stalks, and spread a little fresh Earth over the Beds. At which time you should dig up the Paths between the Beds, and cut off the Roots which may have spread into them, otherwise they will soon over-run the Paths.

There are a great Variety of the Sea Wormwoods, which grow plentifully on the salt Marshes, in diverse Parts of England, which are indifferently gathered and brought to the Markets, and sold for the Roman Wormwood, from which they differ greatly, in the Colour of their Leaves, as also in their Taste and Smell; but by many Persons the Sea Wormwoods are preferred to the true Roman Wormwood, as having a stronger and more grateful Scent; though the Roman Wormwood is thought to be less nauseous to the Stomach. However, as that is now generally disused, it would be to little purpose to recommend it, since it would be difficult to aker a Practice which has been so long continued.

ABUTILON; Yellow Mallow.

6. *ABUTILON althæoides, flore carneo, fructu globofo. Hort. Elth. p. 1.* Abutilon, with the Appearance of *Althæa*, having a flesh-colour'd Flower, and a globular Fruit.

7. *ABUTILON periplocæ acutioris folio, fructu stellato. Hort. Elth. p. 4.* Abutilon, with a sharp pointed Periplocæ Leaf, and a starry Fruit.

8. *ABUTILON Americanum, folio bastato, flore amplo purpureo-ceruleo, pediculis longis insidentibus. Houst.* American Abutilon, with a spear-pointed Leaf, and large purple Flowers, with long Foot-stalks.

9. *ABUTILON Americanum, flore albido, fructu à capsulis vesicariis planis conflato, pediculo geniculo. Martyn. Cent. 1. Pl. 33.* American Abutilon, with a whitish Flower, a smooth swelling Seed-vessel, and a jointed Stalk.

10. *ABUTILON Americanum, ribesii foliis, flore carneo, fructu pentagono aspero. Houst.* American Abutilon, with Currant Leaves, a flesh-colour'd Flower, and a rough five-corner'd Fruit.

11. *ABUTILON Americanum frutescens, folio amplo cordato, subtus lanuginoso, floribus amplis luteis. Houst.* Shrubby American Abutilon, with

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a large heart-shaped Leaf, woolly on the under Side, and large yellow Flowers.

12. *ABUTILON fruticosum aquaticum, folio cordato scabro, flore pallide luteo.* Houst. Shrubby Aquatick Abutilon, with a rough Heart-shaped Leaf, and a pale yellow Flower.

13. *ABUTILON Americanum, populi folio, leviter serrato.* Houst. American Abutilon, with a Poplar Leaf, slightly sawed on their Edges.

14. *ABUTILON Americanum fruticosum, foliis cordatis, floribus parvis purpurascens.* Houst. Shrubby American Abutilon, with Heart-shap'd Leaves, and small purplish Flowers.

15. *ABUTILON Americanum viscosum, althææ folio mucronato, flore parvo luteo.* Houst. American viscous Abutilon, with pointed Marsh-mallow Leaves, and a small yellow Flower.

16. *ABUTILON fruticosum, foliis subrotundis serratis, floribus albis pentapetalis, ad alas foliorum conglomeratis.* Sloan. Cat. Shrubby American Abutilon, with roundish serrated Leaves, and white Flowers growing in Clusters from the Wings of the Leaves.

These Plants are most of them annual, and require to be raised from Seeds every Spring; the first and third Sorts which are mentioned in the former Volume, may be sown in the full Ground in March, in a light Soil, and an open Exposure; where they will come up and thrive very well, and perfect their Seeds in September. The first Sort grows to the Height of three or four Feet, but the third Sort spreads on the Ground, so should be allowed room. These Plants do not bear transplanting well, so should be sown where they are to remain; and where they are too close, they should be thinn'd to give them room to grow: These require no other Culture but to keep them clear from Weeds, which would overrun and destroy them.

The second, fourth, fifth, seventh, eighth, ninth and tenth Sorts are also annual, but coming from hot Countries, they require to be raised on a Hot-bed in the Spring, and must be afterwards transplanted into Pots, and plunged on a fresh Hot-bed, in order to bring them forward, otherwise they will not perfect their Seeds in this Country.

The sixth Sort grows woody, and will rise to the Height of eight or ten Feet; the Leaves are very hoary, and the whole Shrub has the Appearance of the *Althæa frutex*. This Plant may be propagated by sowing of the Seeds in the Spring, on a moderate Hot-bed, and when the Plants are come up two or three Inches high, they should be transplanted each into a small Pot filled with light Earth, and plunged into the Hot-bed, observing to water and shade them until they have taken new Root; and as the Water becomes warm, they should be inured to bear the open Air. In Summer these Plants may be exposed to the open Air, in a warm Situation; but in Winter, they must be placed in a warm Green-house, and will require to be frequently watered; with this Manage-

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ment the Plants will flower and produce ripe Seeds every Year.

The eleventh, twelfth, thirteenth, and fourteenth Sorts, were discovered by my late learned Friend Dr. William Houstoun, in the Spanish West-Indies, from whence he sent the Seeds, and fair Samples of all the Kinds to England. These may all be propagated by Seeds, which must be sown on a Hot-bed early in the Spring, and when the Plants are come up about two Inches high, they should be transplanted into a fresh Hot-bed, in order to bring them forward, observing to water and shade them until they have taken Root, after which time they should be constantly supplied with Water three or four times a Week; and in hot Weather the Glasses should be raised to admit fresh Air to the Plants, which will greatly strengthen them. When the Plants are grown pretty large, they should be taken up carefully, to preserve the Earth to their Roots, and each planted into a separate Pot, filled with light rich Earth, and then the Pots should be plunged into a moderate Hot-bed of Tanner's Bark, observing to water and shade them until they have taken new Root; after which time they should be managed as before. When the Plants are grown too tall to remain under the Glasses of the Hot-bed, they should be removed into the Bark-Stove, where they must remain all the following Winter; but they need not be kept in a very great Heat, a moderate Warmth being much more agreeable to them. The second Year most of these Plants will flower, provided they are continued in the Stove; for if they are exposed to the open Air in the Summer Season, they will not make any Progress, and in a cold Summer will be destroyed: Therefore it is by far the better Method to keep them constantly in the Bark-Stove, and to let them have a large Share of free Air in warm Weather. With this Management most of the Sorts will produce Flowers and Seeds in England, and may be continued for several Years.

ACACIA; The Egyptian Thorn.

9. *ACACIA non spinosa, flore albo, staminibus longis; foliorum pinnis latiusculis, glabris & auritis.* Houst. Acacia without Thorns, having white Flowers with long Filaments, and broad smooth Leaves.

10. *ACACIA humilis, non spinosa, foliis subtus incanis, florum staminibus longis rubentibus.* Houst. Dwarf Acacia without Thorns, having red Flowers with long Filaments.

11. *ACACIA Americana, non spinosa, flore purpureo, staminibus longissimis, siliquis planis villosis, pinnis foliorum tenuissimis.* Houst. American Acacia without Thorns, having purple Flowers, with very long Filaments, flat hairy Pods, and very narrow Leaves.

12. *ACACIA spinosa, foliorum pinnis tenuissimis glabris, floribus globosis luteis, spinis longissimis.* Houst. Prickly Acacia with very narrow smooth Leaves, round yellow Flowers, and very long Thorns.

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13. *ACACIA non spinosa, flore albo, foliorum pinnis latiusculis glabris, filiquis longis planis.* Houst. White-flowering Acacia without Thorns, having broad smooth Leaves, and long flat Pods.

14. *ACACIA non spinosa tenuifolia villosa; floribus globosis albis, filiquis brevibus hirsutis.* Houst. Narrow-leav'd hairy Acacia without Thorns, having round white Flowers, and short hairy Pods.

15. *ACACIA non spinosa, latiore folio villosa, floribus globosis albis, filiquis brevibus hirsutis.* Houst. Broad-leav'd hairy Acacia, having round white Flowers, and short hairy Pods.

16. *ACACIA non spinosa, floribus globosis albis, foliorum pinnis tenuissimis glabris; filiquis ad singula grana tumidis.* Houst. Acacia without Thorns, having round white Flowers, with very narrow smooth Leaves, and jointed Pods.

17. *ACACIA Americana frutescens, non aculeata, flore purpureo.* Plum. Shrubby American Acacia, without Thorns, and a purple Flower.

18. *ACACIA Americana, flore luteo globoso, spinis exiguis, foliorumque pinnis tenuissimis pubescentibus.* Houst. American Acacia, with a round yellow Flower, small Thorns with very narrow Leaves, which are hairy.

19. *ACACIA spinosa tenuifolia, floribus spicatis luteis, filiquis longissimis compressis flavis.* Houst. Narrow-leav'd prickly Acacia, with spiked yellow Flowers, and long compressed yellow Pods.

20. *ACACIA spinosa tenuifolia, spinis singulis cornu bovinum per longitudinem fissum referentibus.* Houst. Prickly narrow-leav'd Acacia, with single Thorns resembling an Ox's Horn, split longitudinally.

21. *ACACIA Americana, faginis foliis, tetraphylla, flosculis staminosis in spicam dispositis.* Pluk. Amaltb. Broad four-leav'd Acacia, with stameneous Flowers disposed in a Spike.

22. *ACACIA humilis latifolia non spinosa, staminibus florum longissimis rubentibus.* Houst. Dwarf broad-leav'd Acacia without Thorns, having long red stameneous Flowers.

23. *ACACIA Americana non spinosa latifolia, filiquis marginatis, & ad singula grana tumidis.* Houst. Broad-leav'd American Acacia, with bordered Pods, which swell where each Seed is lodged.

24. *ACACIA spinosa tenuifolia, filiquis latis, spinis minimis recurvis solitariis.* Houst. Narrow-leav'd thorny Acacia with broad Pods, and small crooked Spines, which grow singly.

25. *ACACIA non spinosa, filiquis latis compressis, pinnis foliorum latiusculis glabris.* Acacia without Thorns, with broad compressed Pods, and broad smooth Leaves.

26. *ACACIA non spinosa tetraphylla latifolia, staminibus florum longissimis rubentibus.* Four-leav'd Acacia without Thorns, with broad Leaves, and long stameneous red Flowers.

27. *ACACIA non spinosa tenuifolia, filiquis varie intortis.* Houst. Narrow-leav'd Acacia without Thorns, and variously contorted Pods.

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28. *ACACIA Americana tetraphylla & spinosa, floribus globosis, staminibus florum longis rubentibus.* Four-leav'd prickly Acacia, with round Flowers having long red Stamina.

These twenty Sorts of *Acacia* were collected by the late Dr. Houstoun, in *Jamaica*, at *Cartbagena* and *Le Vera Cruz*, who sent the Seeds and Specimens to *England*, where many of the Kinds are now growing. These Plants are propagated by Seeds, which must be procured from the Countries where they naturally grow; for they do not produce Seeds in *Europe*. In the bringing over of the Seeds, great care should be taken to preserve them from Insects, which do generally eat into the Pods, and also eat up the Substance of the Seeds, leaving only the outer Covering: These Insects are very small, so as often to escape the Sight; but if you find any Pods to have Holes in them, you may then conclude there are Insects amongst them, so that the sooner you take out the Seeds, the more surely you will preserve them; but you should put them into fresh Papers, and throw away those in which the Pods had been, lest some of the Insects should be left therein.

The Seeds of all these Sorts should be sown on a Hot-bed early in the *Spring*; and when the Plants are come up, they should be transplanted into small Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners Bark, observing to water and shade them until they have taken new Root, after which time, they must be treated in the Manner directed in the former Volume, for the *Egyptian Acacia*. These Plants must be constantly kept in the Bark-Stove, otherwise they will make very little Progress, especially while they are young. In the *Summer* Season these Plants should have a large Share of fresh Air, and must be frequently refreshed with Water, and in *Winter*, the Stove in which they are placed, should be kept to a temperate Degree of Heat; with this Management these Plants will thrive extremely well, and most of them will produce Flowers in two or three Years from the Time of their being sown.

ACANTHUS; Brank-Urfine or Bears-Breech.

5. *ACANTHUS orientalis humillimus, foliis pinnatis aculeatis.* Tourn. Cor. Dwarf Eastern Bears-Beech, with prickly winged Leaves.

This Sort of Bears-Breech was discovered by Dr. Tournefort in the *Levant*, who sent it to the *Royal Garden at Paris*. This may be propagated by Seeds, which should be sown on a Bed of light fresh Earth in the *Spring* of the Year, and when the Plants are come up, they should be carefully weeded, and in very dry Weather they should be watered, which will greatly promote the Growth of the Plants. In this Bed they may remain until the following *Spring*, when they should be carefully taken up and transplanted, where they are designed to remain, which should be in a warm Situation, and on a dry fresh Soil. These Plants should be allowed a great Share of Room, for they

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they are very apt to spread far, and their Leaves do grow to a great Size, when the Plants are strong, so that if any other Plants stand near them, they will be in danger of suffering by being over-spread.

It has been much disputed by the Learned, whether the common Sort of *Acanthus* is the Plant which *Virgil* mentioned under that Name, but this is not easy to be reconciled; for, according to *Pliny*, the *Acanthus* should be a tonfile Plant, and proper to cut into Figures, and *Virgil* makes it an Ever-green, a Berry-bearing Plant, and a Climber: neither of which Properties belong to our *Acanthus*, but the Description which *Dioscorides* has given of the *Acanthus* agrees very well with our common Bears-Breech; and from the Remains of some antient Buildings at Rome, which have the Figure of the *Acanthus* cut on the Capitals of the Pillars, which are yet intire, there is a good Resemblance to the Leaves of the common *Acanthus*.

ACER; The Maple Tree.

9. *ACER trifolia*. C. B. P. Maple Tree with a trifoliated Leaf.

This Sort of Maple grows plentifully about *Montpelier*, and other Places in the South of France, where it rises to the Height of our common Maple; but in England it is very rare at present, and only to be found in some curious Botanick Gardens. This Tree may be propagated from Seeds, in the same manner as our common Maple; but the Seeds should be sown in Autumn, soon after they are ripe, otherwise they seldom grow, which is the Reason why this Tree is so scarce in England; for there are no Trees which have yet produced Seeds here, and the Seeds will not retain their growing Quality so as to bear transporting hither, unless they are put into Earth or Sand, by which Method they might be brought over very safe.

ACETOSA; Sorrel.

4. *ACETOSA foliis crispis*. C. B. P. Sorrel with curled Leaves.

5. *ACETOSA montana maxima*. C. B. P. Greatest Mountain Sorrel.

6. *ACETOSA Pyrenaica, angustissimo et longissimo folio*. Schol. Bot. Pyrenean Sorrel with very long narrow Leaves.

7. *ACETOSA montana, lato ari rotundo folio*. Bocc. Mus. Mountain Sorrel with a broad Arum Leaf.

8. *ACETOSA montana pumila, fagopyri folio*. Bocc. Mus. Dwarf Mountain Sorrel with a Buck-wheat Leaf.

9. *ACETOSA tuberosa radice*. C. B. P. Sorrel with a tuberosé Root.

10. *ACETOSA calthæ folio, peregrina*. C. B. P. Foreign Sorrel with a Marygold Leaf.

11. *ACETOSA lucida, folio atriplicis*. H. R. Par. Shining Sorrel with Orach Leaves.

12. *ACETOSA major Italica, semine rotundiore et glomerato*. H. R. Par. Greater Italian Sorrel, with a round glomerated Seed.

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13. *ACETOSA arvensis lanceolata*. C. B. P. 124. Sheeps Sorrel.

14. *ACETOSA lanceolata angustifolia elatior*. Mor. Hist. Taller narrow-leav'd Spear-pointed Sorrel.

15. *ACETOSA ocymi folio*, Neapolitana. C. B. P. Neapolitan Sorrel with a Basil Leaf.

16. *ACETOSA Americana, foliis longissimis pediculis donatis*. C. B. P. American Sorrel with Leaves growing on long Pedicles.

17. *ACETOSA rotundifolia repens Eboracensis, folio in medio deliquium patiente*. Mor. Hist. Creeping round-leav'd Sorrel of the North.

18. *ACETOSA arborescens, subrotundo folio, ex Insulis Fortunatis*. Pluk. Almag. Shrubby Sorrel with a round Leaf, from the Fortunate Islands.

The fourth Sort of Sorrel is a Variety from the common Sort, which often arises from the same Seeds, as doth also that with white Flowers, so that they do not deserve the Notice which the Writers on Botany have taken of them.

The fifth, sixth, seventh, eighth, ninth, tenth, eleventh, and twelfth Sorts are all of them very hardy Plants, and may be propagated by Seeds, in the same manner as the common Sort, with this Difference only, of allowing the large Sorts more room; for the sixth and seventh Sorts grow very large, and therefore require to be left a Foot asunder, or more. The Roots abide several Years, and may be parted at Michaelmas to propagate their Kinds; tho' they all succeed much better by Seeds, which they usually perfect in this Country.

The thirteenth and fourteenth Sorts grow wild on dry Banks, and on the Sides of Gravel Pits, in diverse Parts of England, and are rarely admitted to have Place in a Garden. These multiply exceedingly by their Roots, which creep very far under Ground, so that they should not be suffered to grow near other Plants. The thirteenth Sort is placed in the Catalogue of Simples, in the College Dispensatory, but, I believe, is seldom ordered in Medicine.

The fifteenth and sixteenth Sorts are annual, and are rarely cultivated, except in Botanick Gardens, for the sake of Variety; these may be propagated by sowing of their Seed on a Bed of light Earth in March, and when the Plants are come up, they should be constantly kept clean from Weeds, and where they are too close to each other, they should be thinned, but they do not bear transplanting well, therefore they should always be sown where they are designed to remain. In June these Plants will flower, and their Seeds will ripen in August.

The seventeenth Sort grows wild in Yorkshire, and several other Northern Counties of England and Scotland, from whence it is often procured for the sake of Variety, but it doth not thrive in the Southern Parts well; it should have a shady Situation, and a moist strong Soil.

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The eighteenth Sort will grow to the Height of twelve or fourteen Feet, and become woody, so as to have the Appearance of a Tree. This is preserved in Green-houses in Winter, by Persons who are curious in collecting Exotick Plants. It may be easily propagated by planting Cuttings in a Bed of light Earth, during any of the Summer Months, observing to water and shade them until they have taken Root, when they should be taken up and planted in Pots filled with fresh Earth, and placed in a shady Situation, until they have taken new Root, after which Time they may be placed amongst Myrtles, Geraniums, and other hardy Exotick Plants, till October, when they should be removed into the Green-house, where they should be placed to have as much free Air as possible in mild Weather, for otherwise they will become very weak and unsightly.

ACONITUM; Wolfsbane.

5. ACONITUM pyramidale multiflorum. H. R. Par. Pyramidal Wolfsbane, with many Flowers, commonly called Monkshood.

6. ACONITUM lycoctonum, humili caule, ac minoribus foliis. Dod. Dwarf Wolfsbane with lesser Leaves.

7. ACONITUM Pyrenaicum, ampliore folio tenuius laciniato. Tourn. Wolfsbane of the Pyrenean Mountains, with larger Leaves, cut into narrow Segments.

8. ACONITUM caeruleum, napelli flore. C. B. P. 283. Autumnal Wolfsbane with a blue Flower.

9. ACONITUM coma inflexa, foliis angustioribus. C. B. P. 283. Narrow-leaved Wolfsbane with inflex'd Heads.

10. ACONITUM coma inflexa, foliis latioribus. Tourn. Broad-leav'd Wolfsbane, with inflex'd Heads.

11. ACONITUM inflexa coma, maximum. C. B. P. Wolfsbane, with the largest inflex'd Heads.

12. ACONITUM seu napellus 1. flore roseo. C. B. P. Wolfsbane, with a Rose-coloured Flower.

13. ACONITUM seu napellus 1. flore albo. C. B. P. Wolfsbane, with a white Flower.

14. ACONITUM seu napellus 1. flore ex caeruleo et albo variegato. C. B. P. Wolfsbane, with a Flower variegated from blue to white.

15. ACONITUM violaceum seu napellus 2. C. B. P. Wolfsbane, with a Violet-coloured Flower.

16. ACONITUM purpureum seu napellus 3. C. B. P. Wolfsbane, with a Purple Flower.

17. ACONITUM caeruleum minus, five napellus minor. C. B. P. Lesser blue Aconite or Wolfsbane.

18. ACONITUM caeruleo-purpureum, flore maximo, five napellus 4. C. B. P. Wolfsbane, with a very large Purple-blue Flower.

19. ACONITUM lycoctonum orientale, flore magno albo. T. Cor. Eastern Wolfsbane, with a large white Flower.

Most of these kinds of Wolfsbane are Natives of the Alps or Pyrenean Mountains, where (it is reported) the Huntsmen who hunt the Wolfs, dip their Arrows into the Juice of these

Plants, which renders the Wounds given with these Arrows, mortal. They are most of them too noxious to have a Place in Gardens which are much frequented by Children, tho' the fifth Sort is too commonly found in old Gardens, and the Flowers are frequently brought into the London Markets, and mixed with other Flowers to adorn Halls, &c. but we have had many Instances of Persons who have lost their Lives, and of others who have with great Difficulty been recovered, after having eaten of this Herb in Sallets, which by Mistake has been put into Sallets instead of Celery, by very ignorant People. A late Instance of this hath been published in the *Philosophical Transactions*, where there is an Account of an unskilful Person gathering some Roots of this Wolfsbane (early in the Spring, when the Plant was newly risen above Ground) instead of Celery: and putting of them into a Sallet, two Persons were poisoned therewith; one of whom was with great Difficulty saved.

All these Kinds of Wolfsbane are great Ornaments to a large Garden, and many of them will thrive in the greatest Shade, and on the poorest Soil, where few other Plants will grow, especially the fifth, eighth, twelfth, fifteenth, sixteenth, and seventeenth Sorts, which are extremely hardy, and multiply greatly by the Root, so that a few Plants of each Sort will, in a few Years, produce a great Stock. The best Time to transplant these Roots, is at Michaelmas, where the Roots remain in an unactive State; for soon after that Time, they begin to put out new Roots, and early in the Spring the Plants will appear above Ground; when it will be too late to transplant them; for although they will often grow if removed at that Season, yet they rarely flower the same Year, and will make very little Increase at the Root.

Some of the Sorts with blue Flowers will grow to the Height of three or four Feet, but those with yellow Flowers usually grow much higher, and the Eastern Kind with white Flowers, I have seen upward of six Feet high; but this Sort is very rare in Europe, and only to be found in some curious Gardens at present.

The fifth Sort commonly begins to flower in April, and continues thro' May, and this is succeeded by some of the other Sorts, so that there is a continual Succession of them, until August, and in a cool Season sometimes later.

ADIANTHUM; Maidenhair.

The Species are;

1. ADIANTHUM foliis Coriandri. C. B. P. True Maidenhair, with Leaves like Coriander.

2. ADIANTHUM Scoticum majus, Coriandri folio. Tourn. Greater Scotch Maidenhair, with a Coriander Leaf.

3. ADIANTHUM Scoticum minus, folio obtuso, altius inciso. Tourn. Lesser Scotch Maidenhair, with an obtuse Leaf, deeply cut in.

4. ADIANTHUM Americanum. Cornut. American Maidenhair of Cornutus.

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The first Sort is a Native in the South Parts of France, and in the Mediterranean, where it grows on Rocks, and old Ruins, from whence it is brought into England, for medicinal Use; tho' the smaller Leaves of Fern are sometimes imposed on ignorant Persons, by those who supply the Markets with Herbs; but as the true Sort is not to be obtained fresh in England, so the surer way is to get it from some knowing Druggist, who imports it from Abroad.

The second and third Sorts have been found growing on the Rocks, in the North of Scotland, but as they are not commonly found, so they have not been introduced into the London Shops.

The fourth Sort is a Native of America, from whence it was originally brought into Europe, and is preserved by curious Persons in their Gardens. This has been formerly preserved in the Stoves in England, as a very tender Plant, but it is found to be very hardy; and in France it is now become so common, as to be used instead of the common Sort, in the Shops at Paris.

There are many other Sorts of this Plant in the East and West-Indies, from whence we have received dried Samples of near thirty Sorts; but as they are Plants which are not cultivated in the European Gardens, so I shall not enumerate them here.

ADIANTHUM ALBUM; vide Ruta Muraria.

ADIANTHUM NIGRUM; vide Filicula.

AGERATUM. The Plants which were mentioned in the former Volume, are by Dr. Tournefort referr'd to *Ptarmica*, of which they are Species according to his Method; but as the first Species stands in the Dispensatory under the Title of *Ageratum*, so I thought proper to continue it under that Name, and have here subjoined some Plants which agree with Dr. Tournefort's Characters of *Ageratum*.

The Characters are;

It hath a personated Flower, consisting of one Leaf, the under Part of which is tubulous, but the upper Part is divided into two Lips, the upper one being divided into two, and the under one into three Parts: the Pistil which arises from the Flower-cup, afterwards becomes an oblong membranaceous Fruit, divided into two Cells, in which are contained many small Seeds.

The Species are;

1. *AGERATUM serratum Alpinum glabrum, flore purpurascens*. Tourn. Smooth *Ageratum* of the Alps with a purplish Flower.

2. *AGERATUM Americanum erectum spicatum, flore purpureo*. Houst. American *Ageratum*, with purple Flowers growing in a Spike.

3. *AGERATUM Americanum procumbens, gnaphalii facie, floribus ad foliorum nodos*. Houst. Creeping American *Ageratum* having the Face of Cudweed, and the Flowers coming out at the setting on of the Footstalks.

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4. *AGERATUM Americanum frutescens, chamaedryos folio, floribus ex foliorum alis*. Houst. Shrubby American *Ageratum*, with a German-der Leaf, and the Flowers growing from the setting on of the Leaves.

The first Sort being a Native of the Alps, is very hardy in respect to Cold, but must have a strong Soil, and not too much exposed to the Sun. This is propagated by parting of the Roots; the best Time for doing of this is in September. This Plant grows very close to the Ground, and has been used in some Parts of England to make Edgings for Borders; but near London, where the Soil is hot, and has been dunged, it is very difficult to maintain this Plant. It flowers in June, but rarely produces ripe Seeds in England.

The other three Sorts were discovered in America, by the late ingenious Dr. William Houstoun, who sent the Seeds of these Plants into Europe. The Seeds of these three Sorts must be sown on a Hot-bed in the Spring, and when the Plants are fit to transplant, they should be placed each into a small Pot filled with light Earth, and placed into a moderate Hot-bed, observing to water and shade 'em until they have taken Root, after which they must have Air and Water in proportion to the Season, and the Warmth of the Bed in which they are placed. In Autumn these Plants will flower, and if they are placed in a Stove, will perfect their Seeds in Winter. They may also be continued thro' the Winter in a Stove, and will flower early the following Summer, so that good Seeds may be obtained by this Method, but they rarely continue longer than two Summers, so that they must be constantly raised from Seeds every Year.

AGRIMONIA; Agrimony.

3. *AGRIMONIA minor, flore albo*. Hort. Cath. Lesser Agrimony, with a white Flower.

4. *AGRIMONIA orientalis humilis, radice crassissima repente, fructu in spicam brevem et densam congestis*. T. Cor. Dwarf Eastern Agrimony, with thick creeping Roots, and the Seeds growing in short thick Spikes.

These two Sorts of Agrimony are preserved in the Gardens of such Persons who are curious in botanical Inquiries; but as they are not used in Medicine, so they are seldom cultivated in other Gardens. They are both very hardy Plants, and may be propagated by sowing of their Seeds on a Bed of light Earth, in the Spring, and when the Plants are come up, they will require no farther Care than only to keep 'em clear from Weeds, until they are large enough to transplant, when they may be planted in an open Bed of light Earth, where they will thrive, and endure the severest Cold of our Climate, as well as the common Sort.

AGRIMONOIDES; Bastard Agrimony.

The Characters are;

It hath a rosaceous Flower, consisting of several Petals, which are placed in a circular Order, issuing out of the Divisions of the Flower-cup; but the Flower and the Flower-cup are received into

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into another Funnel-shaped Empalement, which is fringed. The Flower-cup afterwards becomes a sharp oval Fruit, which is infolded in the outer Empalement, and contains, for the most part, a single Seed.

There is but one Species of this Plant at present known, which is ;

AGRIMONOIDES ; Col. part 1. 145.

This is a perennial Plant, which in its outward Appearance greatly resembles Agrimony, but differs therefrom in its Flower ; for which Reason Dr. Tournefort has separated it from the Agrimones. It may be propagated by Seeds, which should be sown in the Autumn, soon after they are ripe ; for if they are kept out of the Ground till Spring, they are subject to miscarry, or otherwise will remain in the Ground till the following Spring ; whereas those which are sown in Autumn, do seldom fail to come up the next Spring. When the Plants appear, they will require no other Culture, but to keep them clear from Weeds until the following Autumn, when they should be taken up and transplanted where they are to remain. These Plants will grow in almost any Soil or Situation, provided they are not placed under the Drip of Trees.

The second Year these Plants will produce Flowers and the Roots will abide several Years, and may be parted in Autumn, if you are willing to propagate them that way.

AHOUI.

The Characters are ;

It hath a Funnel-shaped Flower, consisting of one Leaf, and is divided into several Parts at the Top ; from whose Cup arises the Pointal, which is fixed like a Nail to the inner Part of the Flower, which afterwards becomes a fleshy Fruit, almost of a Pear-shape, in which is inclosed a three-corner'd Nut.

The Species are ;

1. AHOUI. Thev. Franc. Antart. 66.

2. AHOUI *nerii folio, flore luteo.* Plum. Ahouai, with an Oleander Leaf, and a yellow Flower.

These two Plants grow in great Plenty on the Continent in the Southern Parts of America, but are less common in the Islands of America. The first of them grows to the Height of our common Cherry-trees ; the Leaves are three or four Inches long, and almost two Inches broad. The whole Tree is full of a milky Juice, which flows out on breaking or wounding any Part of it ; the Wood of this Tree stinks most abominably ; and the Kernel of the Nut is a most deadly Poison, so that the Indians always caution their Children against eating of it, for they know of no Antidote to expel this Poison, nor will they use the Wood of this Tree for Fuel ; but they take the Kernel out of the Shell, into which they put small Stones, and then bore a Hole thro' each Shell, and string them ; these they tye about their Legs, to dance with, as is the Custom of our Morris-dancers with Bells.

The second Sort is of much lower Growth than the first, and seldom rises above ten or twelve Feet high. The Fruit of this Tree is of a beautiful red Colour when ripe, but the whole Plant abounds with a milky Juice as the former, and I believe is equally poisonous. I received the Seeds of this Plant from Panama, which were collected by Mr. Robert Millar Surgeon, in the Year 1735 ; they came up in a Hot-bed very well, and some of the Plants produced Flowers the same Year.

These Plants may be propagated from their Nuts, which should be put into small Pots fill'd with light Earth, and plunged into a Hot-bed of Tanners bark, observing to water them frequently to promote their Vegetation. When the Plants are come up about two Inches high, they should be transplanted each into a separate Pot, filled with fresh light Earth, and plunged again into a Hot-bed of Tanners-bark, observing to shade the Glasses in the Heat of the Day, until the Plants have taken new Root ; and they must be frequently refreshed with Water. As the Summer advances, so these Plants should have Air admitted to them, in proportion to the Warmth of the Season ; and when they have filled these small Pots with their Roots, they should be turned out, and transplanted into other Pots of a larger Size, which must also be filled with fresh light Earth, and then should be plunged into the Hot-bed again, observing to water them frequently, as also to admit Air under the Glasses every Day, in proportion to the Warmth of the Season. When the Plants are grown about a Foot high, they should have a larger Share of Air, in order to harden them before the Winter ; but they should not be wholly exposed to the open Air the first Year, because it will stunt their Growth. In the Winter these Plants should be placed in a warm Stove, and during that Season they should be frequently refreshed with Water, but it must not be given to them in great Quantities in cold Weather, lest it should rot their Roots. In the following Spring these Plants should be shifted again into other Pots, at which Time you should take away as much as you conveniently can of the old Earth from their Roots, and afterwards cut off the decayed Fibres, then put them into Pots filled with light rich Earth, and if you have Conveniency to plunge them into a moderate Hot-bed of Tanners-bark, it will greatly promote their taking new Root. In June following these Plants should be inured to bear the open Air by Degrees, into which they should be removed toward the latter End of the same Month ; but they should be placed in a warm Situation, where they may be sheltered from strong Winds : In such a Situation they will bear the open Air of our Climate very well until September, when they should be again removed into the Stove, and must be managed during the Winter Season, as was before directed. These Plants produce their Flowers plentifully in August, but they have not as yet produced any Fruit in this Country. They retain their Leaves all the Year, which

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which being thick, strong, and of a shining green Colour, make a pretty Variety amongst other tender Exotick Plants in the Winter Season, for which they are chiefly esteemed.

ALCEA ; Vervain-Mallow.

The Species are ;

1. *ALCEA vulgaris major, flore ex rubro-roseo.* C. B. P. 316. Greater Vervain-mallow, with a Rose-colour'd Flower.

2. *ALCEA vulgaris major, flore candidiore.* C. B. P. 316. Greater Vervain-mallow, with a white Flower.

3. *ALCEA folio rotundo laciniato.* C. B. P. 316. Vervain-mallow, with a round cut Leaf.

4. *ALCEA tenuifolia crispa.* J. B. II. 1067. Narrow curled-leaved Vervain-mallow.

5. *ALCEA cannabina.* C. B. P. 316. Hemp leaved Vervain-mallow.

6. *ALCEA Afra frutescens, grossulariæ folio, flore parvo rubro.* Boerb. Ind. alt. African shrubby Vervain-mallow, with Gooseberry Leaves, and small red Flowers.

7. *ALCEA Africana arborescens malvæ folio hirsuto, flore parvo purpureo.* Till. African Tree-like Vervain-mallow, with hairy Mallow Leaves, and small purple Flowers.

8. *ALCEA Afra frutescens, grossulariæ folio ampliore, unguibus florum atro-rubentibus.* Aët. Phil. African shrubby Vervain-mallow, with larger Gooseberry Leaves, and dark red Spots at the Bottom of the Flowers.

The first and second Sorts are common in Germany, France, and several Parts of Europe, but the fourth Sort is the most common in England. The first Sort is ordered for medicinal Use, but as that is not so common in England, the third is substituted in its stead, and I believe either of the four first Sorts may be used indifferently. These four Sorts are biennial Plants, and seldom continue after they have perfected Seeds ; these Plants may be propagated by sowing their Seeds in the Spring, and when the Plants are come up, they should be thinned, leaving them about a Foot asunder, where they may remain till they flower and seed ; for they do not bear transplanting well, their Roots running for the most part downright, to a considerable Depth. These Plants should have a poor Soil, for in a rich Earth they grow too rank, and are subject to rot in Winter.

The fifth Sort is an abiding Plant, and is apt to creep at the Root. This may be propagated by Seeds as the former, and should have a lean Soil.

The sixth and seventh Sorts rise to the Height of eight or ten Feet, and make handsome Shrubs. These may be propagated by sowing their Seeds in the Spring, on a Bed of light Earth, and when the Plants are come up four or five Inches high, they should be each transplanted into a separate small Pot, filled with fresh light Earth, observing to water and shade 'em until they have taken Root ; after which they may be exposed, during the Summer, to the open Air ; but in Winter

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they must be placed in the Green-house with Myrtles, &c. observing to give them a large Share of Air in mild Weather, and frequently refresh them with Water. With this Management, they will continue flowering most Part of the Year.

The eighth Sort is a seminal Variety from the sixth Sort, from the Seeds of which I have several times had the eighth arise.

ALCHIMILLA ; Ladies Mantle.

The Species are ;

4. *ALCHIMILLA minor.* Mor. Hort. Reg. Bles. The lesser Ladies Mantle.

5. *ALCHIMILLA Alpina pentaphyllea minima, lobis fimbriatis.* Bocc. Mus. Par. 2. 18. Least five-leav'd Ladies Mantle of the Alps, with fringed Leaves.

6. *ALCHIMILLA montana minima.* Col. par. 1. 146. Least Mountain Ladies Mantle, commonly called, Parsley Breakstone.

7. *ALCHIMILLA supina, gramineo folio, minore flore.* Tourn. Low Grass-leaved Ladies Mantle, with a smaller Flower.

8. *ALCHIMILLA erecta, gramineo folio, minore flore.* Tourn. Upright Grass-leav'd Ladies Mantle with a smaller Flower.

9. *ALCHIMILLA gramineo folio, majori flore.* Tourn. Grass-leav'd Ladies Mantle, with a larger Flower.

10. *ALCHIMILLA linariæ folio, calyce florum albo.* Tourn. Ladies Mantle, with a Toad-flax Leaf, and a white Flower-cup.

11. *ALCHIMILLA linariæ folio, calyce florum subluteo.* Tourn. Ladies Mantle, with a Toadflax Leaf, and a yellowish Flower-cup.

12. *ALCHIMILLA orientalis, linariæ folio brevissimo, calyce florum albo.* Tourn. Cor. Eastern Ladies Mantle, with a very short Toadflax Leaf, and a white Flower-cup.

13. *ALCHIMILLA Græca, kali folio, calyce florum albido.* Tourn. Cor. Greek Ladies Mantle, with a Glasswort Leaf, and a whitish Flower-cup.

These Plants are many of them preserved in Botanick Gardens for Variety ; they all grow wild in England, Holland and Flanders, except the two last mentioned, which Monf. Tournefort found in his Voyage to the Levant. They are most of them annual Plants, so if they are permitted to shed their Seeds in the Autumn, the Plants will come up, and require no other Culture, but to keep them clear from Weeds. The sixth Sort is an annual Plant which grows in great Plenty on Heaths, and other uncultivated Places in diverse Parts of England, and if it is transplanted into a Garden, and permitted to shed its Seeds, will maintain itself without any farther Care. This Plant is often brought to the Markets in London, and sold for Rupture-wort, which is a very different Plant from this, but doth not grow wild near London.

ALKEKENGİ ; Winter Cherry.

The Characters are ;

It hath a Flower which consists of one Leaf, and is expanded at the Top, but of a pentagonal Figure ; the Fruit which succeeds the Flower is about

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about the Bigness of a Cherry, and is inclosed in the Flower-cup, which swells over it in form of a Bladder.

The Species are ;

1. *ALKEKENGİ officinarum*. Tourn. Common Winter Cherry of the Shops.

2. *ALKEKENGİ officinarum foliis variegatis*. Tourn. Common Winter Cherry with variegated Leaves.

3. *ALKEKENGİ fructu parvo verticillato*. Tourn. Winter Cherry, with small Fruit growing in Whorles round the Stalks.

4. *ALKEKENGİ Virginianum, fructu luteo*. Tourn. Virginian Winter Cherry, with yellow Fruit.

5. *ALKEKENGİ Indicum majus*. Tourn. Greater Indian Winter Cherry.

6. *ALKEKENGİ Americanum annuum ramossimum, fructu ex luteo virescenti*. Houst. American annual branching Winter Cherry, with a yellowish green Fruit.

7. *ALKEKENGİ Americanum annuum maximum viscosum*. Houst. The largest annual American Winter Cherry.

8. *ALKEKENGİ Barbadosense patulum, parvo flore, fructu amplo mucrone productiori*. Ait. Phil. N. 399. Dwarf Barbadoes Winter Cherry, with a small Flower, and an ample pointed Fruit.

9. *ALKEKENGİ Curassavicum, foliis origani incanis, flore viete sulphureo, fundo purpureo*. Boerb. Ind. alt. 11. 66. Hoary Winter Cherry from Curasso, with Origany Leaves, and Sulphur-coloured Flowers, with purple Bottoms.

10. *ALKEKENGİ Americanum frutescens, fructu globofo rubro, vesica atro-purpurea*. Houst. Shrubby American Winter Cherry, with a round red Fruit, having a dark purple Bladder.

The first Sort is very common in the English Gardens, where it is preserved for the Appearance of its Fruit, which is ripe in October, and continues often till the middle of December ; it is about the Size of a common Cherry, and of a fine red Colour. This Fruit is inclosed in a Bladder, which when ripe, bursts, and exposes the Fruit to Sight. It may be propagated by sowing of the Seeds in the Spring, or by the Roots, which creep very much, so that if they are not confined, they will soon overspread a large Tract of Ground ; therefore to have them more beautiful, they should be confined in Pots, which should be placed in the Shade in Summer, and if constantly watered in dry Weather, will produce great Numbers of Fruit. This Sort is ordered for medicinal Use, by the College of Physicians. The second Sort is a Variety of the first, differing only in having variegated Leaves. This may be managed as the former.

The third, ninth and tenth Sorts are abiding Plants, which require to be shelter'd from the Cold in Winter. The third Sort grows to a Shrub of about three Feet high, and produces great Numbers of Fruit annually. This may be propagated by sowing of the Seeds on a moderate Hot-bed in the Spring, and when the Plants are come up two Inches high, they should be transplanted on another Hot-bed,

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observing to water and shade 'em until they have taken new Root ; after which Time they must have a large Share of Air, otherwise they will draw up very weak. In June these Plants should be potted, and placed in a shady Situation until they have taken Root ; after which they may be exposed to the open Air in Summer, but in Winter they must be placed in a warm Green-house.

The ninth Sort creeps very much at the Root, so is easily propagated by parting the Roots in the Spring. This must be housed in Winter as the former, but may be exposed in Summer. It produces Flowers annually, but has not produced any Fruit in England.

The tenth Sort grows to the Height of ten or twelve Feet. This is propagated by sowing of the Seeds on a Hot-bed in the Spring, and must be afterwards potted, as hath been directed for the third Sort ; but this must be placed in a Stove in Winter, it being the tenderest of all the Sorts here mentioned.

The fourth, fifth, sixth, seventh, and eighth Sorts, are annual Plants, and require to be raised on a Hot-bed in the Spring ; and when the Plants are come up two Inches high, they should be transplanted to another moderate Hot-bed, observing to water and shade them until they have taken Root ; after which time they must have a large Share of fresh Air, and in June they may be taken up with a Ball of Earth to their Roots, and transplanted into Pots or Borders of light Earth, where they may remain to perfect their Fruit.

ALLIUM ; Garlick.

The Species are ;

4. *ALLIUM sylvestre ampicarpon, foliis porraceis, floribus et nucleis purpureis*. Raii Syn. Broad-leav'd Mountain Garlick, with purple Flowers.

5. *ALLIUM sylvestre bicornes, flore ex herbaceo albicante, cum triplici in singulis petalis stria atro-purpurea*. Raii Syn. Ed. 3. 370. Wild Garlick, with an herbaceous strip'd Flower.

6. *ALLIUM Holmense, sphaerico capite*. Raii Syn. Ed. 3. 370. Great round-headed Garlick of the Holms-Island.

7. *ALLIUM bulbiferum Virginianum*. Boerb. Ind. alt. Virginian Garlick.

The fourth, fifth, and sixth Sorts, grow wild in diverse Parts of England, but are by the Curious in Botany, preserved in their Gardens for Variety. They are extreme hardy, and will thrive in almost any Soil or Situation, requiring no other Culture, but to keep them clear from Weeds. The best Season to transplant them is in August, soon after their Leaves decay ; for if they are suffered to remain long after, they will shoot out new Roots, after which time they do not bear transplanting so well.

The seventh Sort was brought from Virginia into England. This is also very hardy, and will thrive in any Soil or Situation. It produces a Cluster of Roots on the Top of the Stalks, which, if permitted to fall on the Ground, will take Root, and thereby multiply exceedingly.

ALYSSOIDES.

The Characters are ;

It hath a Flower in form of a Cross, consisting of four Leaves, out of whose Flower-cup rises the Pointal, which afterward becomes an elliptical thick Fruit, divided into two Cells by an intermediate Partition, which is parallel to the demi-elliptical turgid Valves, and filled with round flat Seeds, having Borders round them.

The Species are ;

1. ALYSSOIDES fruticosum, leucii folio viridi. Tourn. 218. Shrubby Alyssoides with a green Stock-gillyflower Leaf.

2. ALYSSOIDES incanum, foliis sinuatis. Tourn. 218. Hoary Alyssoides with sinuated Leaves.

3. ALYSSOIDES fruticosum reticum, leucii folio incano. Tourn. Cor. Shrubby Alyssoides of Candy, with a hoary Stock-gillyflower Leaf.

4. ALYSSOIDES orientalis annua, myagri folio. Tourn. Cor. Oriental annual Alyssoides with a Myagrum Leaf.

The first and third Sorts are perennial Plants, which rise to the Height of two or three Feet. These may be propagated by sowing their Seeds on a Border of light Earth in the Spring, and when the Plants are come up four Inches high, they may be transplanted into Pots fill'd with light fresh Earth, and placed in a shady Situation until they have taken new Root, when they may be exposed to the open Air until the latter End of October ; when they should be placed under a common Hot-bed Frame, where they may be sheltered from severe Frost in Winter, but they must have as much free Air as possible in mild Weather, and should be frequently refreshed with Water. The following Summer they will flower and produce ripe Seeds, but the Plants may be continued four or five Years, by sheltering of them in the Winter, as I have directed. They will often live thro' the Winter in the open Air, provided they are planted in a Situation where they are protected from the North and East Winds.

The second Sort is a biennial Plant. This must be sown on a Border of light Earth in the Spring, and when the Plants are come up three Inches high, some of them should be potted, in order to shelter them in Winter ; but there should be some Plants left where they were sown ; which in a warm Season will flower, and produce ripe Seeds the same Season ; but if these should miscarry, those in the Pots may be preserved thro' the Winter, under a common Frame ; and in the succeeding Spring they should be turned out of the Pots into the full Ground, where they will flower strongly, and produce a large Quantity of Seeds.

The fourth Sort is an annual Plant. This must be sown on a warm Border in the Spring, in the Place where the Plants are to remain, for it doth not bear transplanting well ; these Plants should be thinned, if they come up too thick ; in August they will flower, and in September they will perfect their Seeds.

ALYSSON ; Madwort.

To the former Species add,

4. ALYSSON perenne montanum incanum. Tourn. 217. Hoary perennial Mountain Madwort.

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5. ALYSSON balimi folio, argenteo angusto. Tourn. 217. Madwort, with a narrow Silver-colour'd Sea-purslain Leaf.

6. ALYSSON fruticosum incanum. Tourn. 217. Hoary Shrub Madwort.

7. ALYSSON fruticosum aculeatum. Tourn. 217. Prickly Shrub Madwort.

8. ALYSSON Creticum, foliis angulatis, flore violaceo. Tourn. Cor. Candy Madwort with angular Leaves, and violet-colour'd Flowers.

9. ALYSSON veronica folio. Tourn. 217. Madwort, with a Speedwel Leaf.

11. ALYSSON segetum, foliis auriculatis acutis. Tourn. 217. Corn Madwort, with auriculated sharp pointed Leaves.

12. ALYSSON segetum, foliis auriculatis acutis, fructu majori. Tourn. 217. Corn Madwort, with auriculated sharp pointed Leaves, and a larger Fruit.

13. ALYSSON incanum luteum, serpylli folio majus. Tourn. 217. Larger yellow hoary Madwort, with a Mother of Thyme Leaf.

14. ALYSSON incanum, serpylli folio, minus. Tourn. 217. Lesser hoary Madwort, with a Mother of Thyme Leaf.

The fourth, fifth and sixth Sorts, may be propagated by sowing of their Seeds soon after they are ripe, on a Bed of light Earth, in an open Situation, where the Plants will soon appear. These will continue two or three Years, and if their Seeds are permitted to scatter, the Plants will come up and thrive without any farther Care than to keep them clear from Weeds.

The eighth Sort is an abiding Plant, which rarely produces Seeds in England, but multiplies greatly by Off-sets, which may be planted into Pots filled with light fresh Earth, either in Spring or Autumn. These Pots must be sheltered from extreme Cold in Winter, but must have a great Share of Air in mild Weather. Some of the Plants may be planted on a warm Border, where they will endure the Cold of our ordinary Winters very well. This Plant produces great Quantities of Flowers early in the Spring.

The other six Sorts are annual Plants, which should be sown early in the Spring, on a Bed of light fresh Earth, where they are to remain, for they do not bear transplanting well, so that the Plants should be thinned, and kept clear from Weeds, which is the only Culture they require. If the Seeds of these Sorts are suffered to scatter, the Plants will come up in Autumn, and stand through the Winter, so will more certainly produce good Seeds the following Summer.

ANACAMPSEROS ; Orpine or Live-long.

The Characters are ;

It hath a perennial Root : the Leaves, Stalks, Flowers, and Fruit, are like those of the House-leek ; but the Leaves of this Plant do not grow in a circumscrib'd Order, as do those of the House-leek ; but the Plant arises with a Stalk, upon which the Leaves are plac'd on every Side : the Flowers grow in Umbels, upon the Tops of the Stalks.

The Species are ;

1. ANACAMPSEROS *vulgo Fabacraffa*. J. B. III. 681. Common Orpine.
2. ANACAMPSEROS *purpurea*. J. B. III. 682. Purple Orpine.
3. ANACAMPSEROS *maxima* J. B. III. 682. Greatest Orpine.
4. ANACAMPSEROS *Lusitanica hæmatodes maxima*. Tourn. The greatest red Portugal Orpine.
5. ANACAMPSEROS *radice rosam spirante*, major. Tourn. 264. Greater Rose-root.
6. ANACAMPSEROS *radice rosam spirante*, minor. Tourn. 264. Lesser Rose-root.
7. ANACAMPSEROS *foliis eleganter variegatis*. Orpine with strip'd Leaves.

The first Sort grows wild in many Parts of England, in Woods, and other shady Places. This was some Years since in great Esteem for adorning Chimnies in the Summer Season, by framing a Lattice with Laths, so as to fit the whole Fire-place, and then fasten the green Plant, regularly to the Lattice, so as that the whole might be covered ; and this though done only with the Cuttings of the Plant, if kept in the Chimney, and now and then refreshed with Water, would continue green for near two Months, and the Cuttings would shoot out in Length.

This Plant is also used in Medicine.

The other Sorts are preserved by the Curious in Botany, for the sake of Variety ; these may be planted in Pots, filled with fresh undunged Earth, and should have a shady Situation, where they will thrive better than if too much exposed to the Sun. They are all very hardy (except the striped Sort, which will require to be shelter'd in Winter) in respect to Cold, but they must not have too much Wet in Winter, which will sometimes rot their Roots. They may be transplanted either in Spring or Autumn, at which times their Roots may be parted to propagate them ; or they may be increased by planting Cuttings of either of the four first Sorts, in any of the Summer Months, which will easily take Root, and may afterwards be transplanted where they are to remain ; but the two Kinds of Rose-roots, are only propagated by parting their Roots. These Plants should not be placed near a Dove-house, for the Pigeons are so fond of them, that they will soon destroy them.

ANAGALLIS ; Pimpernel.

The Characters are ;

The Flower consists of one Leaf, which is shaped like a Wheel, and cut into several Segments ; the Pointal, which rises out of the Flower-cup, is fixed like a Nail in the middle of the Flower ; afterwards becomes a roundish Fruit, which when ripe opens transversely into two Parts, one of which lies incumbent on the other, inclosing many angular Seeds which adhere to the Placenta.

The Species are ;

1. ANAGALLIS *phæniceo flore*. C. B. P. Male Pimpernel, with a red Flower.
2. ANAGALLIS *cæruleo flore*. C. B. P. Female Pimpernel, with a blue Flower.

3. ANAGALLIS *floribus obsolete purpureis*. Park. Theat. Pimpernel, with Flowers of a worn-out purple Colour.

4. ANAGALLIS *flore albo*. C. B. P. Pimpernel, with a white Flower.

5. ANAGALLIS *tenuifolia Monnelli*. Clus. Narrow-leav'd Pimpernel, with a blue Flower.

The first Sort is very common in the Corn-fields, and other cultivated Places, in most Parts of England. The second and third Sorts are sometimes found wild in the Fields, but are less common than the first in England. The fourth is a Variety of the second Sort, which arises accidentally from the Seed, so is not lasting. These four Sorts are annual Plants, which arise from Seeds in the Spring, and are seldom preserved in Gardens ; but where-ever they do grow, if they are permitted to remain until they have scattered their Seeds, they will thrive fast enough without any Care. The first and second Sorts are placed amongst the medicinal Plants in the College Dispensatory.

The fifth Sort is a very beautiful small Plant, which spreads on the Ground, like the former Sorts, but produces a great Number of fine blue Flowers in April, May, and June, which makes a pretty Appearance : This may be propagated by sowing of the Seeds soon after they are ripe, on a warm Border of light Earth, where the Plants will arise in the Spring, and some of them will produce Flowers the same Season. Some of these Plants should be planted into Pots, that they may be sheltered in the Winter ; for in very hard Frosts they are sometimes destroyed. This Sort will abide two or three Years.

ANAGYRIS ; Stinking Bean-Trefoil.

The Characters are ;

It hath a papilionaceous (or Butterfly) Flower, whose Standard is short when compared to the other Petals : the Pointal which rises from the Flower-cup, afterwards becomes a Pod shaped like a Kidney-bean, containing many kidney-shaped Seeds. To which Notes should be added, the Leaves grow by Threes on one common Foot-stalk.

The Species are ;

1. ANAGYRIS *fætida*. C. B. Stinking Bean-Trefoil.

2. ANAGYRIS *fætida Cretica, oblongis foliis, luteis floribus*. Barr. Icon. Candy stinking Bean-Trefoil, with oblong Leaves, and yellow Flowers.

The first Sort grows wild in the South of France, as also in Spain and Italy : This is a Shrub which usually rises to the Height of eight or ten Feet, and produces its Flowers in April and May, which are of a bright yellow Colour, growing in Spikes, somewhat like those of the Laburnum, the Seeds are seldom perfected in this Country, which is the Reason of its present Scarcity in England.

The other Sort is a Native of Candy, and some of the Islands of the Archipelago ; and at present is very rare in the English Gardens. This Sort hath longer Leaves than the former, and flowereth later in the Summer, so that it very rarely produces Seeds.

These may be both propagated by laying down their tender Branches, in the Spring, ob-

observing in dry Weather to supply them with Water, which if duly performed, the Layers will have taken Root by the following Spring, when they should be cut off from the old Plants, a little time before they begin to put out their Leaves, and planted in a warm Situation; for if they are too much exposed to the cold Winds, they will be in danger of being destroyed in a hard Winter. This Method of propagating these Plants, is to supply their Defect in not producing ripe Seeds in this Country; for the Plants which are produced from Seeds, will be much handsomer, and will rise to a much greater Height.

If you propagate these Plants from Seeds, you should sow them on a warm Border of light fresh Earth, toward the End of March, observing always to do it in dry Weather; for if much wet should fall after the Seeds are in the Ground, they will rot. If the Seeds are good, and the Season favourable, the Plants will appear in a Month after the Seeds were sown; at which time you should carefully clear them from Weeds, and in very dry Weather they should be frequently refreshed with Water; if these be duly observed, the Plants will be six or eight Inches high before Winter. While these Plants are young they will be in much greater danger of suffering by Frost; therefore, if the Winter should prove very severe, you should shelter them with Mats during the Continuance of the Frost, but in mild Weather they should always be exposed to the open Air. In March following you should carefully take up these Plants, observing not to injure their Roots; then you must transplant them into a Nursery-bed, placing them in Rows at a Foot distance, and the Plants at six Inches distance in the Rows; observing, if the Season should prove dry, to give them Water until they have taken new Root, after which time they will require no other Culture, but to keep them clear from Weeds, during the Summer Season; but if the following Winter should prove very severe, it will be proper to screen them either with Mats or Pease-haulm, otherwise they may be destroyed. In this Bed they may remain two Years, by which time they will be fit to transplant into the Places where they are designed to remain. The best Season to remove them is in March, just before they begin to shoot, and observe not to injure their Roots, as also to water them, if the Season should prove dry, until they have taken Root; as also to lay some Mulch on the Surface of the Ground about their Roots, to prevent the Air from penetrating to dry their Fibres, which will save much Trouble in watering. The fourth Year from Seeds, these Plants will begin to produce their Flowers, and will continue to produce Flowers every Year after, so will be very proper to intermix with other flowering Shrubs of the same Growth.

ANANAS; The Pine-Apple.

The Characters are;

It hath a Flower consisting of one Leaf, which is divided into three Parts, and is Funnel-shap'd; the Embryo's are produced in the Tubercles, these

afterwards become a fleshy Fruit full of Juice, the Seeds which are lodged in the Tubercles are very small, and almost Kidney-shaped.

The Species are;

1. *ANANAS aculeatus, fructu ovato, carne albida.* Plum. Oval-shap'd Pine-apple, with a whitish Flesh.

2. *ANANAS aculeatus, fructu pyramidato, carne aurea.* Plum. Pyramidal Pine-apple, with a yellow Flesh.

3. *ANANAS folio vix serrato.* Boerb. Ind. alt. 2. 83. Pine-apple with smooth Leaves.

4. *ANANAS lucide wirens, folio vix serrato.* Hort. Elth. Pine-apple with shining green Leaves, and scarce any Spines on their Edges.

5. *ANANAS aculeatus, fructu pyramidato virescente, carne aurea.* The green Pine-apple, with a pyramidal Fruit, commonly called the Sugar-loaf Pine in Barbadoes.

6. *ANANAS fructu ovato ex luteo virescente, carne lutea.* The Olive-colour'd Pine.

The first Sort is the most common in Europe, but the second Sort is much preferable to it, the Fruit of this being larger, and much better flavour'd; the Juice of this Sort is not so astringent as is that of the first, so that this Fruit may be eaten in greater Quantity, with less Danger. This Sort generally produces six or seven Suckers, immediately under the Fruit, whereby it may be increased much faster than the common Sort, so that in a few Years it may be the most common Sort in England.

The third Sort is preserved by some curious Persons, for the sake of Variety, but the Fruit is not near so good as either of the former. The fifth Sort is at present the most rare in Europe; there being very few of the Plants at present: This is esteemed the best Sort yet known, by some of the most curious Persons in America, who have thrown out all the other Sorts from their Gardens; and cultivate only this Kind. The Plants of this Sort may be procured from Barbadoes and Mountserrat, in both which Places it is cultivated. The sixth Sort was brought from Jamaica, this is not very common in England as yet; it is esteemed a very good flavoured Fruit by those Persons who have tasted it; but it being a very backward Sort, will render it less valuable in our Climate; for this Sort will require a Month longer time to ripen, from the first Appearance of the Fruit to its Maturity, than most of the other Sorts. I have also heard of another Kind of Pine, whose Flesh is very green, and the Outside yellow; but having never seen the Sort, I cannot give any Account of it. There are many other Kinds to be found in the several Countries where they are cultivated, which have arisen from Seeds, which differ in their Shape, Colour, and the Flavour of their Fruit; so that as these Fruits become common in Europe, all the bad Sorts should be rejected, and such only as produce fine Fruit should be cultivated.

In the former Volume of the Gardeners Dictionary, I have given full Directions for the cultivating this excellent Fruit in England; so shall not repeat here what is already inserted in

in that, but shall add a few Instructions founded on later Observations; as also Directions how to manage such as are infested with Insects, which often totally destroy the Plants, or at least weaken them so much, as not to be recovered in less than a Year, tho' managed with the greatest Skill. And, First,

As to the Earth in which these should be planted, if you have a rich good Kitchen Garden Mould, not too heavy, so as to detain the Moisture too long, nor over-light and sandy, it will be very proper for them without any Mixture; but where this is wanting, you should procure some fresh Earth from a good Pasture, which should be mixed with about a third Part of rotten Neats-dung, or the Dung of an old Melon or Cucumber-bed, which is well consumed. These should be mixed two or three Months at least before they are used, and should be often turned, that their Parts may be the better united, as also the Clods well broken. This Earth should not be screened very fine, for if you only clear it of the great Stones, it will be better for the Plants, than when it is made too fine. You should always avoid mixing any Sand with the Earth, unless it be extremely stiff, and then it will be necessary to have it mixed at least six Months before it is used, and it must be frequently turned, that the Sand may be incorporated in the Earth, so as to divide its Parts; but you should not put more than a sixth Part of Sand, for too much Sand is very injurious to these Plants.

In the *Summer* Season, when the Weather is warm, these Plants must be frequently watered, but you should not give to them large Quantities at each Time, you must also be very careful that the Moisture is not detained in the Pots, by the Holes being stopp'd, for that will soon destroy the Plants. If the Season is warm, they should be watered every other Day, but in a cool Season twice a Week will be often enough; and during the *Summer* Season, you should once a Week, water them gently all over their Leaves, which will wash the Filth from off them, and thereby greatly promote the Growth of the Plants.

There are some Persons who frequently shift these Plants out of the Pots, but this is by no means to be practised by those who propose to have large well-flavoured Fruit; for unless the Pots be filled with the Roots, by the time the Plants begin to shew their Fruit, they commonly produce small Fruit, which have generally large Crowns on them. So that the Plants will not require to be new potted oftener than twice in a Season; the first Time should be about the End of *April*, when the Suckers and Crowns of the former Years Fruit (which remained all the *Winter* in those Pots in which they were first planted) should be shifted into larger Pots, *i. e.* those which were in half-penny or three-farthling Pots, should be put into Penny or at most three-half-penny Pots, according to the Size of the Plants; for you must be very careful not to over-pot them, nothing being more prejudicial to these Plants. The second Time for shifting of them, is, toward the latter End

of *August*, or the Beginning of *September*, when you should shift those Plants which are of a proper Size for fruiting the following *Spring*, into two-penny Pots, which are full large enough for any of these Plants. At each of these Times of shifting the Plants, the Bark-bed should be stirred up, and some new Bark added, to raise the Bed up to the Height it was at first made; and when the Pots are plunged again into the Bark-bed, the Plants should be watered gently all over their Leaves, to wash off the Filth, and to settle the Earth to the Roots of the Plants. If the Bark-bed be well stirred, and a Quantity of good fresh Bark added to the Bed, at this latter shifting, it will be of great Service to the Plants, and they may remain in the Tan, until the Beginning of *November*, or sometimes later, according to the Mildness of the Season, and will not require any Fire before that time. During the *Winter* Season these Plants will not require to be watered oftener than every third or fourth Day, according as you find the Earth in the Pots to dry; nor should you give them too much at each time, for it is much better to give them a little Water often, than to over-water them, especially at that Season.

You must observe never to shift those Plants which shew their Fruit, into other Pots, for if they are removed after the Fruit appears, it will stop the Growth, and thereby cause the Fruit to be smaller, and retard its ripening, so that many times it will be *October* or *November* before the Fruit is ripe. Therefore you should be very careful to keep the Plants in a vigorous growing State, from the first Appearance of the Fruit, for upon this depends the Goodness, and Size of the Fruit; for if they receive a Check after this, the Fruit is generally small, and ill-tasted.

When you have cut off the Fruit from the Plants, whose Kind you are desirous to propagate, you should trim the Leaves, and plunge the Pots into a moderate Hot-bed, observing to refresh them frequently with Water, which will cause them to put out Suckers in Plenty, so that a Person may be soon supplied with Plants enough of any of the Kinds, who will but observe to keep their Plants in Health.

There is not any thing which can happen to these Plants, of a more dangerous Nature, than to have them attacked by small white Insects, which appear at first like a white Mildew, but soon after have the Appearance of Lice; these attack both Root and Leaves at the same time, and if they are not soon destroyed, will spread over a whole Stove in a short time; and in a few Weeks will intirely stop the Growth of the Plants, by sucking out the nutritious Juice, so that the Leaves will appear yellow and sickly, and have generally a great Number of yellow transparent Spots all over them. These Insects, after they are fully grown, appear like Bugs; and adhere so closely to the Leaves, as not to be easily wash'd off, and seem, as if they had no Life in them. They were originally brought from *America* upon the Plants which were brought from thence, and I believe they are the same Insects

fects which have destroyed the Sugar Canes of late Years, in some of the *Leeward* Islands. Since they have been in *England*, they have spread greatly in such Stoves, where there has not been more than ordinary Care taken to destroy them. They have also attacked the Orange Trees in many Gardens near *London*, and have done them incredible Damage, but I do not find they will endure the Cold of our Climate in Winter, so that they are never found on such Plants as live in the open Air. The only Method I have yet been able to discover for destroying these Insects, is, by washing the Leaves, Branches, and Stems, of such Plants as they attack, frequently with Water, in which there has been a strong Infusion of Tobacco-stalks, which I find will destroy the Insects, and not prejudice the Plants. But this Method cannot be practised on the *Ananas* Plants, because the Insects will fasten themselves so low between the Leaves, that it is impossible to come at them with a Sponge to wash them off; so that if all those which appear to Sight are cleared off, they will soon be succeeded by a fresh Supply from below; and the Roots will be also equally infested at the same time. Therefore, where-ever these Insects appear on the Plants, the safest Method will be, to take the Plants out of the Pots, and clear the Earth from the Roots; then prepare a large Tub, which should be filled with Water, in which there has been a strong Infusion of Tobacco-stalks; into this Tub you should put the Plants, placing some Sticks cross the Tub, to keep the Plants immersed in the Water. In this Water they should remain twenty-four Hours, then take them out, and with a Sponge wash off all the Insects from the Leaves and Roots, which may be easily effected when the Insects are killed by the Infusion; then cut off all the small Fibres of the Roots, and dip the Plants into a Tub of fair Water, washing them therein, which is the most effectual way to clear them from the Insects. Then you should pot them in fresh Earth, and having stirred up the Bark-bed, and added some new Tan to give a fresh Heat to the Bed, the Pots should be plunged again, observing to water them all over the Leaves, (as was before directed) and this should be frequently repeated during the Summer Season; for I observe these Insects always multiply much faster where the Plants are kept dry, than in such Places where the Plants are duly watered, and kept in a growing State. And the same is also observed in *America*, for it is in long Droughts that the Insects make such Destruction of the Sugar Canes. And in those Islands where they have had several very dry Seasons of late, they have increased to such a Degree, as to destroy the greatest Part of the Canes in the Islands, rendering them not only unfit for Sugar, but so poison the Juice of the Plant, as to render it unfit to make *Rum*. So that many Planters have been ruined by these Insects.

As these Insects are frequently brought over from *America* on the *Ananas* Plants, which come from thence, so those Persons who pro-

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cure their Plants from thence, should look carefully over them when they receive them, to see they have none of these Insects on them; for if they have, they will soon be propagated over all the Plants in the Stove where these are placed; therefore, whenever they are observed, the Plants should be soaked as was before directed, before they are planted into Pots.

It hath been the common Practice of most Persons, who have cultivated this Fruit in *Europe*, to build dry Stoves in which they keep their Plants in Winter, placing the Pots on Scaffolds, (after the Manner in which Orange-Trees are placed in a Green-house) and in the Summer to keep them in Hot-beds of Tanners Bark under Frames; but this is found by late Experience a bad Method; for the Glasses lying so near over the Plants, there is not a sufficient Quantity of Air in the Bed to nourish the Fruit, and give it that vinous Flavour which good Fruit always abounds with; and when these Glasses are closely shut down in the Night, the Vapours which arise from the Fermentation of the Tan, and the Perspiration of the Plants, are closely pent in, and being condensed against the Glasses, fall in Water on the Plants.

Therefore, to remedy this Inconvenience, it is now the Practice of those Persons who are desirous to propagate this Fruit, to erect low Stoves, with Pits therein for the Hot-bed, (after the manner of the Bark-stove described and figured in the former Volume of the *Gardeners Dictionary*) but much lower; for as these Plants do not grow above two Feet and a half, or at most three Feet, above the Pot in Height, so there is no Necessity for having these Stoves very high. Some Persons build them with upright Glasses in Front, about four Feet high, and sloping Glasses over these, which rise about six Feet high, so that there is just Height enough for Persons to walk upright, on the Back-side of the Bark-bed. Others make but one Slope of Glasses, from the Top of the Stove, down to the Plate, which lies about six or eight Inches above the Bark-pit, in the Front of the Stove. So that in this Stove there is no Walk made in the Front between the Bark-pit and the Glasses; nor is it very necessary, where the Bark-pit is not above six Feet and a half wide; for it will be easy to reach from the Walk on the Back-side of the Pit, to water the Plants in Front, with a Watering-pot that has a long Spout; and when the Plants are to be shifted, or the Bark renewed, which is not done but in the Spring, or Summer Months, the Glasses may be taken down, and the Plants removed with Safety. One of these Stoves about twenty Feet long in the Clear, with the Pit for the Tan reaching from end to end, and six Feet and a half wide, will contain about a hundred Plants, so that whoever is desirous to have this Fruit, may easily proportion their Stove to the Quantity of Fruit which they are willing to have.

But it will be also necessary to have a Bark-pit under a deep Frame, in order to raise the young Plants; for in this Bed you should plunge

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the Suckers, when they are taken from the old Plants, as also the Crowns which come from the Fruit; so that this Frame will be as a Nursery to raise the young Plants to supply the Stove. But these Plants should not remain in these Frames longer than till the Beginning of November, at which time they must be removed into the Stove, and being small, may be crowded in amongst the larger Plants; for as they will not grow much during the Winter Season, so they may be placed very close together. The Beginning of March you must remove these Plants out into the Hot-bed again, which should be prepared a Fortnight before, that the Tan may have acquired a proper Heat; but you should be careful that the Tan be not too hot, for that might scald the Fibres of the Plants, if they are suddenly plunged therein. Therefore, if you find the Bark too hot, you should not plunge the Pots above two or three Inches into the Tan, letting them remain so until the Heat of the Tan is a little abated, when you should plunge the Pots down to their Rims in the Bed. If the Nights should continue cold after these Plants are removed into the Bed, you must carefully cover the Glasses with Mats, otherwise by coming out of a warm Stove, they may receive a sudden Check, which will greatly retard their Growth, which must be carefully avoided, because the sooner the Plants are set growing in the Spring, the more time they will have to gain Strength, in order to produce large Fruit the following Season.

You should not plunge the Pots too close together in this Frame, but allow them a proper Distance, that the lower Part of the Plants may increase in Bulk, for it is on this that the Magnitude of the Fruit depends; for when the Plants are placed too close, they draw up very tall, but do not obtain Strength, so that when they are taken out of the Bed, the Leaves are not able to support themselves; but all the outward long Leaves will fall away, leaving the smaller middle Leaves naked; and this sometimes will cause them to rot in the Centre. You must also observe, when the Sun is very warm, to raise the Glasses of the Hot-bed with Stones, in order to let out the Steam of the Bed, and to admit fresh Air; for one Neglect of this kind in a very hot Day, may destroy all the Plants, or at least so scald them, that they will not get over it in many Months. It will also be very proper, in extreme hot Weather, to shade the Glasses in the middle of the Day with Mats; for the Glasses lying so near to the Leaves of the Plants will occasion a prodigious Heat at such Times.

There are several Persons who let their *Ananas* Plants remain plunged in the Bark-bed in the Stoves all the Winter Season; but where this is practised, the Plants must not be watered so often, as those which are placed on Boards during that Season; for the Moisture which arises from the Bark, will preserve the Bottom of the Pots from drying, so that a small Share of Water will be sufficient for these Plants. Others, who do not permit their Plants to remain in the Tan all the Winter, and have

no dry Stove, raise their Pots out of the Bed, and level the Bark, then lay some old Boards on the Bark, upon which they place their Pots, in this Situation they let them remain until the Beginning of March, at which time they renew the Bark-bed in the Stove, and plunge the Plants therein. In renewing of the Bark at this Season, it is not necessary to take all the old Bark out, one half of it will be sufficient; for the remaining half should be stirred to the Bottom, and mixed with the new Tan, which will prevent it from being too hot. The Pits in these Stoves need not be more than two Feet and a half, for that will contain a sufficient Quantity of Tan, to preserve a Heat.

ANGURIA; The Water-Melon.

The Characters are;

It hath trailing Branches, as the Cucumber or Melon, and is chiefly distinguished from the other cucurbitaceous Plants by its Leaf, which is deeply cut and jagged, and by its producing an eatable Fruit.

The Species are;

1. *ANGURIA citrullus dicta. C. B. P.* Common Water-Melon, called Citrul.
2. *ANGURIA Indica maxima. C. B. P.* The largest Indian Water-Melon.
3. *ANGURIA carne rubente, semine nigro majori. Inst. R. H.* Water-Melon, with a red Flesh, and large black Seeds.
4. *ANGURIA carne rubente, semine nigro minori. Inst. R. H.* Water-Melon, with a red Flesh, and smaller black Seeds.
5. *ANGURIA carne flavescente, semine nigro. Inst. R. H.* Water-Melon, with a yellowish Flesh, and black Seeds.
6. *ANGURIA fructu rotundo, carne rubente, semine rubro.* Water-Melon, with a round Fruit, having a red Flesh, and red Seeds.
7. *ANGURIA triphyllus Americana, parvo fructu. Inst. R. H.* Three-leav'd American Water-Melon, with a small Fruit.
8. *ANGURIA Americana, fructu echinato eduli. Inst. R. H.* American Water-Melon, with a prickly eatable Fruit.

The six first-mentioned Sorts are cultivated in Spain, Portugal, Italy, and most other warm Countries in Europe; as also in Africa, Asia, and America; and are by the Inhabitants of those Countries greatly esteemed for their wholesome cooling Quality; but in England they are not so universally esteemed, tho' some few Persons are very fond of them. I shall therefore give Directions for the raising of these Fruits, so that such Persons as are willing to be at the Expence and Trouble of raising them, may not be at a Loss for Instructions.

You must first provide yourself with some Seeds, which should be two or three Years old; for new Seeds are apt to produce vigorous Plants, which are seldom so fruitful as those of a moderate Strength. The best Sorts to cultivate in England, are the fourth and sixth Sorts; and next to these are the first and fifth Sorts; for the second and third Sorts produce very large Fruit, which seldom ripen in this Climate. Having provided yourself with good Seed, you should prepare a Heap of new Dung

Dung the Beginning of *February*, which should be thrown in a Heap for about eight Days to heat; then you should make a Hot-bed for one single Light, for which one good Load of Dung will be sufficient; this Dung should be well wrought in making of the Bed, and must be beaten down pretty close with a Dung-fork, that the Heat may not be too violent, and of longer Continuance: When the Dung is thus laid, you should cover it about four Inches thick, with good light Earth, and having spread it very even, you should put the Frame and Glass over it, leaving it to warm, two Days before you put the Seeds into it, observing, if the Steam rises pretty much, to raise up the Glass with a Stone, to let it pass off. Then, if you find your Bed in proper Temper, you may sow your Seeds therein in Drills, covering them over with Earth, about half an Inch. After this, if you find your Bed very warm, you must give Air in the Day-time by raising of the Glasses; but if the Bed is cool, you must cover it well with Mats every Night, as also in bad Weather. In four or five Days after, you must prepare another Hot-bed to receive these Plants, which will be fit to transplant in ten Days, or a Fortnight at most, after the Seeds are sown; this Bed need not be very large, for a few of these Plants will fill a large Quantity of Frames, when they are planted out for good; and while the Plants are young, there may be a great Quantity kept in one Light; so that those Persons who raise early Cucumbers, and Musk-Melons, may also raise these Plants in the same Bed; for two or three Lights will be sufficient to raise Plants enough of all three Kinds, to supply the largest Families, until they are planted out for good. In the Management of these Plants while young, there is little Difference from the Directions given in the former Volume for raising Musk-Melons, therefore I need not repeat it here. The chief Thing to be observed, is, to let them have a large Share of Air whenever the Weather will permit, otherwise the Plants will draw up weak, and be good for little. As these Plants will require two or three Hot-beds, to bring the Fruit to Perfection, so it will be the better way to put the Plants into Baskets, as was directed for the raising of early Cucumbers; but you should not plant more than two Plants in each Basket, for if one of them lives, it will be sufficient; therefore when both the Plants do succeed, you should draw out the weakest and most unpromising of them, before they begin to put out their Side-shoots, otherwise they will entangle and render it difficult to be performed, without greatly injuring the remaining Plant.

The Baskets in which these Plants are to be planted, need not be more than a Foot diameter, so that one Light will contain twelve of them; which will be sufficient for thirty-six Lights, when they are planted out for good; for where the Plants are vigorous, one single Plant will spread so far as to fill three Lights, and if they have not room, they seldom set their Fruit well.

These Baskets may remain in the Nursery-beds, until the Plants have spread, and

put out many Runners; for when the Heat of this Bed declines, it is soon revived by adding a proper Lining of warm Dung to the Sides of the Bed quite round; so that when they are taken out of this Bed, and placed in the Ridges where they are to remain, the Heat of these Beds will last so long as to set their Fruit, which is of great Consequence; for when the Plants are ridged out very young, the Beds are generally made of a great Thickness in Dung, in order to continue their Heat, so that for some time after they are made, they are so extreme hot, as to endanger the scalding of the Plants: and by the time the Fruit begins to appear, there is little Heat left in the Beds, which often occasions the Fruit to drop off and come to nothing.

After these Plants are placed in the Beds where they are to remain, you must carefully lead the Shoots as they are produced, so as to fill each Part of the Frame, but not to crowd each other; and be careful to keep them clear from Weeds, as also to admit fresh Air whenever the Weather will permit; they must also be frequently watered, but do not give it them in great Quantities. In short, there is little Difference to be observed in the Management of these, from that of Musk-Melons, but only to give them more room, and to keep the Beds to a good Temperature of Heat, without which these Fruit will seldom come to good in this Country.

ANONIS; Rest-Harrow.

The additional Species are;

10. ANONIS *Caroliniana perennis non spinosa, foliorum marginibus integris, floribus in thyrso candidis*. Smooth perennial Carolina Rest-Harrow, with intire Leaves, and white Flowers growing, in a loose Spike.

11. ANONIS *Hispanica frutescens, folio tridentato carnosio*. Inst. R. H. Shrubby Spanish Rest-Harrow, with a tridented fleshy Leaf.

12. ANONIS *Alpina humilior, radice amplia et dulci*. Inst. R. H. Dwarf Rest-Harrow of the Alps, with a large sweet Root.

13. ANONIS *Alpina pumila glabra non spinosa purpurea*. Inst. R. H. Dwarf smooth purple Rest-Harrow of the Alps.

14. ANONIS *Hispanica frutescens, folio rotundiori*. Inst. R. H. Shrubby Spanish Rest-Harrow, with a rounder Leaf.

15. ANONIS *frutescens Americana, flore purpureo*. Inst. R. H. Shrubby American Rest-Harrow, with a purple Flower.

16. ANONIS *Asiatica frutescens, floribus luteis amplis*. Inst. R. H. Asiatic shrubby Rest-Harrow, with large yellow Flowers.

17. ANONIS *Americana angustifolia humilior, & minus hirsuta*. Houst. Dwarf narrow-leav'd American Rest-Harrow.

18. ANONIS *non spinosa, foliis cisti instar, glutinosis & odoratis*. Sloan. Cat. Jam. Shrubby glutinous and sweet-smelling American Rest-Harrow, without Thorns, and Leaves like the Dwarf Cistus.

19. ANONIS *Americana erectior non spinosa, foliis rotundioribus, floribus amplis luteis*. Upright American Rest-Harrow, without Spines, having

having round Leaves, and large yellow Flowers.

20. *ANONIS viscosa, spinis carens, lutea major.* C. B. P. Large yellow Rest-Harrow, without Spines.

21. *ANONIS spinis carens, lutea minor.* C. B. P. Smaller yellow Rest-Harrow, without Spines.

22. *ANONIS flore luteo parvo.* H. R. Par. Rest-Harrow, with a small yellow Flower.

23. *ANONIS pusilla glabra angustifolia lutea.* Inst. R. H. Smooth narrow-leav'd Dwarf Rest-Harrow, with a yellow Flower.

24. *ANONIS non spinosa, flore luteo variegato.* C. B. P. Smooth Rest-Harrow, with a yellow variegated Flower.

25. *ANONIS non spinosa hirsuta viscosa, odore theriacæ.* Hort. Cath. Sup. Hairy viscidous Rest-Harrow, without Spines, and smelling like Venice-treacle.

26. *ANONIS non spinosa minor glabra procumbens, flore luteo.* Sloan. Cat. 75. Lesser trailing smooth American Rest-Harrow, without Spines, and having yellow Flowers.

The tenth Sort is a perennial Plant, which dies to the Root every Winter, but rises again the succeeding Spring. This Plant produces long Spikes of white Flowers in June, and the Seeds ripen in September. It is propagated from Seeds, which should be sown in the Spring upon a gentle Hot-bed; and when the Plants are come up, they should be transplanted each into a separate Half-penny Pot, filled with fresh Earth, and plunged on another very moderate Hot-bed, observing to water and shade 'em until they have taken Root, after which time they should be inured to the open Air; and in the latter End of June the Pots should be placed Abroad, where they may remain until the Middle of October, when they must be placed under a Hot-bed Frame, to shelter them in severe Frost, but in mild Weather they should have as much free Air as possible. The Spring following these Plants should be taken out of the Pots, and planted in warm Borders, where they are to remain; for they shoot their Roots a great Depth into the Earth, so do not bear transplanting well after they have made strong Roots. These Plants will continue several Years, and as their Roots increase, so they will produce a greater Number of Flowers.

The eleventh, twelfth, thirteenth and fourteenth Sorts, are abiding Plants, which may be propagated by sowing of their Seeds in the same manner as hath been directed for the tenth, and the young Plants should also be treated the first Year as was directed for that Sort. The following Spring you must plant out the twelfth and thirteenth Sorts, into the full Ground, where they will thrive much better than if kept in Pots, and being both very hardy, they will endure the severest Cold of our Climate without Shelter. These produce their Flowers in April and May, and in good Seasons will sometimes perfect their Seeds in England.

The eleventh and fourteenth Sorts become shrubby; these are more tender than the former Sorts, so that some of these Plants should

be kept in Pots, that they may be sheltered from the Frost in Winter, and the others may be planted in a warm Border, where they will endure the Cold of our ordinary Winters very well; but in very sharp Winters, these Plants which are exposed, will be destroyed. These two Sorts flower in the Spring, (at which time they make a handsome Appearance amongst other hardy Exotick Plants) and sometimes they will produce ripe Seeds in England. They may also be propagated by Cuttings, which should be planted in Pots filled with light rich Earth, and plunged into a very moderate Hot-bed, observing to water and shade them, until they have taken Root; after which time they should be removed into the open Air, and should remain Abroad until the End of October, or the Beginning of November, when they should either be removed under a Hot-bed Frame, where they may be covered in frosty Weather, or else placed in the Green-house, near the Windows; for they should have as much Air as possible in mild Weather, otherwise they will produce weak Shoots, and seldom flower near so well as those which are treated hardily.

The fifteenth, sixteenth, seventeenth and eighteenth Sorts, are Natives of America. These are also abiding Plants, which may be propagated by sowing of their Seeds in small Pots, filled with light fresh Earth, in the Spring of the Year; these Pots should be plunged into a moderate Hot-bed of Tanners-bark, observing to water the Earth gently when you perceive it dry; but you must not give them too much Water, lest it burst the Seeds, and cause them to rot. In about three Weeks or a Month after sowing, the Plants will appear, when they should be frequently refreshed with Water, to promote their Growth; and when they are two Inches high, they should be shaken out of the Pots, and carefully parted, planting each Plant into a separate small Pot, filled with the same rich Earth as the Seeds were sown in. Then the Pots should be plunged again into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which time they should be constantly refreshed with Water, as the Season may require, and in warm Weather the Glasses of the Hot-bed should be raised with Stones, to admit Air to the Plants in proportion to the Heat of the Weather. When the Plants have grown so as to fill these small Pots with their Roots, they should be shaken out of them, and transplanted into Pots a size larger, and then plunged into the Hot-bed again; for these Plants being Natives of warm Countries, they must be treated after the manner of other tender Exotick Plants. In Winter these Plants must be placed in the Bark-stove, but in Summer they should have a large Share of fresh Air, otherwise they will not flower very strong, nor will they ever produce good Seeds, if they have not Air and Moisture in warm Weather.

The nineteenth and twenty-sixth Sorts are also very tender Plants. These are propagated by Seeds, which should be treated exactly in the

the same manner as the former Sorts; but these are not lasting Plants, for they seldom continue longer than two Years; the second Year they produce Flowers, and perfect their Seeds, after which they generally decay.

The twentieth, twenty-first, twenty-second, twenty-third, twenty-fourth and twenty-fifth Sorts, are all annual Plants, which are hardy. The Seeds of these should be sown about the Middle of *March*, on a warm Border, where they are designed to remain; for they do not bear transplanting very well; so the best Method is, to sow the Seeds in Drills, about two Feet asunder, and when the Plants are come up, they should be thinned so as to leave the Plants about five or six Inches apart in the Rows. This is all the Culture which these Plants require, unless it be to keep them clear from Weeds; which should be constantly observed. In *July* these Plants will produce their Flowers, and in *September* they will perfect their Seeds, which should be carefully gathered to preserve their Species.

ANTIRRHINUM; Snap-Dragon, or Calves-Snout.

The additional Species are;

1. **ANTIRRHINUM luteo flore.** C. B. P. Snap-Dragon, with a yellow Flower.
2. **ANTIRRHINUM latifolium, pallido amplo flore.** Bocc. Mus. Broad-leav'd Snap-Dragon, with a large pale Flower.
3. **ANTIRRHINUM Lusitanicum, flore rubro elegantissimo.** Par. Bat. Portugal Snap-Dragon, with a most elegant red Flower.
4. **ANTIRRHINUM Hispanicum villosum, origani folio.** Inst. R. H. Spanish hairy Snap-Dragon, with a wild Marjoram Leaf.
5. **ANTIRRHINUM Hispanicum altissimum, angustissimo folio.** Inst. R. H. Tall Spanish Snap-Dragon, with a very narrow Leaf.
6. **ANTIRRHINUM medium, flore albo patulo.** Virid. Lusit. Middle Snap-Dragon, with a white spreading Flower.
7. **ANTIRRHINUM majus saxatile, angustissimis foliis, flore purpurascens minori.** Bar. Icon. Greater Rock Snap-Dragon, with very narrow Leaves, and a lesser purple Flower.
8. **ANTIRRHINUM Creticum angustifolium, flore maximo purpureo.** Tourn. Cor. Narrow leav'd Snap-Dragon of Crete, with the largest purple Flower.

All the Sorts of Snap-Dragons are pretty Ornaments in a Garden, and requiring very little Culture, renders them more acceptable. They are all hardy Plants, and will resist the Cold of our Winters extremely well, especially if they are planted on a dry, gravelly or sandy Soil; for when they are planted in a rich moist Soil, they will grow very luxuriant for a time, but are very subject to rot in Autumn or Winter, and are much more susceptible of Cold, than when they are in a dry, hungry, rocky Soil: So that these Plants may be placed amongst Stones, or they will grow in the Joints of old Walls, where they may be placed so as to render some abject Parts of a Garden very agreeable, for they will continue in Flower several Months; and if the Seeds are permitted

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to shed, there will be a continual Supply of young Plants, without any Trouble.

Where-ever these Plants are designed to grow on Walls, or on a rocky barren Soil, the Seeds should be sown the Beginning of *March*, where they are designed to remain; (for if the Plants are first raised in a better Soil, and afterward transplanted into those Places, they seldom succeed well). When the Plants are come up, they will require no other Culture but to keep them clear from Weeds, and where they come up too thick, to pull some of them out, so as to give them room to grow. In *July* these Plants will begin to flower, and will continue flowering till the Frost prevents them. These Plants which grow on Walls, will be strong, and have woody Stems, which will continue two or three Years.

APHACA; Vetchling.

The Characters are;

It hath a Butterfly Flower, out of whose Empalement rises the Pointal, which afterwards becomes a Pod, full of roundish Seeds. To these Notes must be added, that two Leaves only grow at the Joints of the Stalks, out of whose Wings proceed the Tendrils.

We have but one Species of this Plant, (viz.)

APHACA. Lob. Icon. Yellow Vetchling.

This Plant is found wild in divers Parts of England, on arable Land, but is seldom preserved in Gardens. It is an annual Plant, which perishes soon after the Seeds are perfected. The surest Method to cultivate this Plant, is to sow the Seeds on a Bed of light Earth in Autumn, soon after they are ripe; for if they are kept out of the Ground until Spring, they seldom grow; and if some of the Plants do come up at that Season, they seldom perfect their Seeds so well as those which were sown in Autumn. These Seeds should be sown where the Plants are designed to remain; for they seldom succeed well, if they are transplanted. All the Culture these Plants require, is to keep them clear from Weeds, and to thin them where they come up too close, leaving them about ten Inches or a Foot asunder.

APIUM; Parsley.

The Species are;

1. **APIUM hortense seu petroselinum, vulgo.** C. B. P. Common Garden Parsley.
2. **APIUM vel petroselinum crispum.** C. B. P. Curled Parsley.
3. **APIUM hortense latifolium.** C. B. P. Broad-leaved Garden Parsley.
4. **APIUM Lusitanicum rotundifolium.** Inst. R. H. Round-leav'd Portugal Parsley.
5. **APIUM hortense latifolium, maxima crassissima suavi et eduli radice.** Boerb. Broad-leav'd Garden Parsley, with a large sweet eatable Root.
6. **APIUM palustre, & Apium officinarum.** C. B. P. Smallage.
7. **APIUM dulce, CELERI Italorum.** H. R. Par. Celeri.
8. **APIUM dulce degener, radice rapacea.** Jessieu. Turnep-rooted Celeri, commonly call'd *Celeriac*.
9. **APIUM Macedonicum.** C. B. P. The Macedonian Parsley.

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10. **APIUM**

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10. *APIUM Lusitanicum maximum*, folio trilobato, flore luteolo. Boerb. Ind. Great Portugal Parsley, with a trilobated Leaf, and a yellowish Flower.

11. *APIUM Pyrenaicum*, thapsia facie. Inst. R. H. Pyrenean Parsley, with the Face of the Deadly Carrot.

12. *APIUM montanum*, sive *petraeum album*. J. B. Raii. White Mountain Parsley.

13. *APIUM montanum*, sive *petraeum album elatius*. Taller white Mountain Parsley.

The common Parsley must be sown early in the Spring, for the Seeds remain a long time in the Earth, the Plants seldom appearing in less than six Weeks after sowing the Seeds. This Sort is generally sown in Drills by the Edges of Borders in the Kitchen-garden, because it is much easier to keep it clear from Weeds, than if the Seeds are sown promiscuously on a Border, and the Parsley is soon cut. But if the Roots are desired for Use, then the Seeds must be sown thin, and when the Plants are come up, they should be houghed out single, as is practised for Carrots, Onions, &c. observing also to cut up the Weeds; if this be observed, the Roots will become fit for Use by August.

All the Sorts of Parsley are biennial Plants, seldom continuing longer than two Years, so that there should be a fresh Supply sown every Year; for that which comes up one Year, will be fit to cut by June the same Season, and will continue all the following Winter and Spring fit for Use; but in June it will run up to Seed, after which time it is not so good for Kitchen Use; but by that Season the young Parsley which was sown in the Spring, will be fit to cut. The best time to cut the common Parsley to distil, is in July, when it will be full in Flower.

The Method of cultivating the curled, large rooted Parsley, and Celeri, being exhibited in the former Volume, I shall not repeat it in this Place.

Smallage is a common Weed, by the Side of Ditches and Brooks of Water, in most Parts of England, so that it is seldom cultivated in Gardens; but if any Person is willing to propagate it, the Seeds should be sown soon after they are ripe, on a moist Spot of Ground; and when the Plants are come up, they may be either transplanted into a moist Soil, or houghed out, and left six or eight Inches asunder, where they may remain for good. The Seed of this Plant is one of the lesser warm Seeds, and both that and the Herb are used in Medicine.

The other Sorts of Parsley are preserved in curious botanick Gardens, but as they are Plants of no Use, so they are seldom propagated in other Gardens. These may be propagated as the common Sort, but the Plants growing much larger, should be left at a greater Distance.

ARISARUM; Friers-cowl.

The Characters are;

It agrees with the Dragon and Arum, from both which this Plant differs in having a Flower resembling a Cowl.

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The Species are;

1. *ARISARUM latifolium majus*. C. B. P. 196. Broad-leav'd Friers-Cowl.

2. *ARISARUM angustifolium*, *Dioscoridis forte*. C. B. P. Narrow-leav'd Friers-Cowl.

There are some other Species of this Plant, but those two here mentioned are what I have observed in the English Gardens. They are both propagated by Off-sets, which they send forth in Plenty; these should be taken off from the old Roots about the middle of September, which is the proper Season for transplanting of them, their Leaves being at that time almost decayed. These Plants never rise very high, so should be placed amongst others of low Growth, otherwise they may be overborne by their neighbouring Plants, and destroyed. They should have a fresh undunged Soil, and a Situation not too much exposed to the Sun. They flower in May, but rarely produce any Seeds in our Climate.

ARISTOLOCHIA; Birthwort.

The Species omitted in the former Volume are;

5. *ARISTOLOCHIA longa vera*. C. B. P. True long-rooted Birthwort.

6. *ARISTOLOCHIA polyrhizos*, *auriculatis foliis*, *Virginiana*. Pluk. Phyt. Virginian Snake-Root.

7. *ARISTOLOCHIA erecta*, *flore atro-purpureo*, *foliis angustis*, *radice repente*. Plum. Cat. Narrow-leav'd upright Birthwort, with creeping Roots, commonly called *Contrayerva* in Jamaica.

8. *ARISTOLOCHIA folio cordiformi*, *flore longissimo auro-purpureo*, *radice repente*. Plum. Cat. Creeping-rooted Birthwort, with long yellowish purple Flowers, and a Heart-shaped Leaf.

9. *ARISTOLOCHIA scandens*, *foliis laurinis*, *fructu maximo*. Climbing Birthwort, with Laurel Leaves, and the largest Fruit.

The first and second Sorts are used in Medicine, but as they are very rare in England, their Roots are brought from the Southern Parts of France, (where they are very common) and are sold in the Shops. These Plants are both tolerably hardy, and will endure the Cold of our ordinary Winters very well, in the full Ground. These Roots should be planted early in the Spring, before they begin to shoot, in a warm Situation, and should have a fresh light Soil, rather dry than moist. They should be planted six Inches deep in the Earth, that they may be less exposed to the Frost, and in Summer the Drought will not so soon affect them. They will shoot up about two Feet high, and produce their Flowers in June; and in a kindly Season they will perfect their Seeds in this Country. It will be very proper to have some Roots of each Sort in Pots, which may be sheltered under a Frame in very severe Frost, so that the Kinds may be preserved, if those in the full Ground should be destroyed.

The third Sort is sometimes used in Medicine. This is a terrible Plant for creeping at the Root, so that if once it has taken in a Garden, it will be difficult to extirpate again, and will destroy whatever Plants grow near it; therefore it should be planted in some abject Part of the Garden by itself, for it will thrive in almost any Soil or Situation.

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The fourth and fifth Sorts grow wild in Spain, Italy, and the South of France; but in England they are preserved for Variety in botanick Gardens. These must be planted in Pots filled with light rich Earth, and sheltered from severe Cold in Winter, otherwise they will be destroyed thereby; but they should have as much free Air as possible in mild Weather. These produce Flowers every Year, but never perfect their Seeds in this Country.

The sixth Sort is the *Snakeroot*, which is greatly used in Medicine; but these Roots are brought over from Virginia and Carolina, where there are two or three Species of this Plant. In England it is preserved as a Curiosity, in Pots filled with light fresh Earth, and requires to be sheltered from severe Cold in Winter; in Summer they must be frequently watered, and should be placed in a well-shelter'd Situation, where in a good Season they will perfect their Seeds, by which new Plants may be obtain'd. These Seeds should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they must be transplanted into Pots, and managed as hath been directed for the old Plants.

The seventh, eighth, and ninth Sorts, are Natives of the warmest Parts of America, so must be preserved with great Care in this Climate. These may be propagated by sowing their Seeds in the Spring; the best Method to raise them, is, to sow the Seeds in Pots filled with light fresh Earth, and plunge them into a Hot-bed of Tanners-bark, observing to refresh the Earth frequently with Water, as also to raise the Glasses, when the Sun is very hot, to let the Steam of the Bed pass off; in about a Month or five Weeks after the Seeds are sown, the Plants will begin to appear; when they should be gently refreshed with Water every other Day, and a proper Share of Air admitted to them, when the Weather is warm. When the Plants are advanced to be about two Inches high, they should be carefully transplanted, each into a separate Pot filled with fresh light Earth, and should then be plunged into the Hot-bed again, observing to water and shade them until they have taken Root; after which Time they should have Air admitted to them every Day in proportion to the Warmth of the Season, and they must be frequently watered.

About the Beginning of August these Plants will have filled the Pots with their Roots, when they should be shaken carefully out of the Pots, and their Roots trimmed; then they should be planted into larger Pots filled with the same fresh Earth as before; and those which are of low Growth should be plunged into the Hot-bed again, but the taller Sorts should be plunged into the Bark-stove, especially the ninth Sort, which will rise to a great Height.

The seventh Sort is known in Jamaica by the Name of *Contrayerva*, and is greatly used as an *Alexipharmic*, by the Inhabitants of that Island.

All these three Sorts will require to be kept in the Bark-stove, otherwise they will not thrive in this Climate.

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ARUM; Wake-Robin *Arum*
The Species omitted in the former Volume are;

1. *ARUM vulgare non maculatum. C.B.P.*
Common Arum, or Wake-Robin.

2. *ARUM maculatum maculis candidis. C.B.P.*
Arum whose Leaves are mark'd with white.

3. *ARUM maculatum maculis nigris. C.B.P.*
Arum with black spotted Leaves.

4. *ARUM venis albis, italicum maximum. C.B.P.*
Greatest Italian Arum, whose Leaves have white Veins.

8. *ARUM maximum Aegyptiacum, quod vulgo colocasia, cauliculis nigricantibus, Zeylanica. H.L.*
Greatest Egyptian Arum or Colocasia with blackish Stalks.

The first Sort is very common under Hedges, and by the Sides of Banks, in most Parts of England. This is directed by the College of Physicians for medicinal Use; but the second and third Sorts, which are Varieties of the first, and are often found interspersed with it, I believe, may be either of them used indifferently. These Plants are seldom kept in Gardens, being so common in the Field, where they are usually gathered for the Markets. The best Season for taking up these Roots for Use is in August, after their Leaves are decayed; for when they are taken up while their Leaves are green, the Roots shrink, and lose most of their Virtue.

The fourth Sort is equally hardy with our common Sort, and will endure the Cold of our Winters very well. This is preserved in botanick Gardens for Variety, but is seldom planted in Gardens of Pleasure. All these Plants should have a light dry Soil, and require no other Culture but to keep them clear from Weeds.

The eighth Sort is very tender: this must be preserved in the Bark-stove, and should be managed in the same manner as was directed for the Egyptian Sort, in the former Volume.

ARUNDO; the Reed.
This is distinguished from the Grasses by its Magnitude, and by its having a firm Stem.

The Species omitted in the former Volume are;

1. *ARUNDO vulgaris palustris. J. B. 2. 485*
The common Reed.

2. *ARUNDO sativa, quæ donax Dioscoridis & Theophrasti. C. B. P.* The large manured Reed.

3. *ARUNDO Indica variegata, seu Laconica Theophrasti Cornut. 55.* The variegated Reed.

4. *ARUNDO Indica arborea, MAMBU vel BAMBU dicta.* The Bambu Cane.

5. *ARUNDO Indica arborea, amplo pediculato folio, BAMBU SPECIES ALTERA. Raii Hist 1316.* The other Bambu Cane.

6. *ARUNDO scriptoria atrovirens. C. B. P.*
Dark red Reed, which is used as a Pen for writing.

7. *ARUNDO repens vel chamæcalamus. C. B. P.*
Dwarf creeping Reed.

The first Sort is so very common by the Sides of Rivers, and large standing Waters in divers Parts of England, that it is needless for me to say any thing of its Culture. This is cut

cut in Autumn, when the Leaves begin to fall, and the Stems are changed brown, for making Hedges in Kitchen-Gardens, and for many other Uses.

This second Sort is brought from *Portugal* and *Spain*, and is used by the Weavers, as also to make fishing Rods.

The third Sort is a Variety of the second, differing therefrom in having variegated Leaves. This being weaken'd by the Variegation, is of much lower Growth, and is more in Danger of being destroyed by Frost, so should be sheltered in Winter.

The two Sorts of *Bambu* are of great Service to the Inhabitants of *India*, who make most of their common Utensils of the Stems of these Canes, which grow to a prodigious Magnitude in those Countries. In *England* they are preserved as Curiosities, and require a Stove to preserve them in Winter; they require a rich light Earth, and should be frequently watered; their Roots spread very far, so they should have a large Share of Room: I have known one of these Plants, when put into a large Tub, and placed in a Bark-bed in the Stove, by being often watered, produce one Stem from the Root upwards of sixteen Feet high, in the Space of four Months. These two Sorts may be propagated by Off-sets, which they are very apt to set off, when they are allowed a large Share of Room for their Roots to spread; but if their Roots are confined, they will not thrive; when these Plants strike their Roots thro' the Sides of their Tubs, and are permitted to run into the Bark-bed, they will thrive prodigiously; I have had one of these Plants, which was permitted to root into the Tan, which produced four Stems from the Root, each as large as a common Broom-staff, and in four Months grew to be twenty Feet high.

The sixth Sort is what the *Turks* make their writing Pens withal; this grows in a Valley near Mount *Athos*, as also on the Banks of the River *Jordan*, but there are none of the Plants in *England*. This Sort may be managed as the *Bambu*, as may also the seventh Sort, which grows in *Arabia*.

ASPARAGUS; Sperage.

The Characters are;

It hath a rosaceous Flower, consisting of six Leaves, placed orbicularly, out of whose Centre rises the Pointal, which afterwards turns to a soft Fruit, or almost globular Berry, and full of Seeds, which are commonly hard. To these Marks may be added, that the Leaves are finely cut.

The Species are;

1. *ASPARAGUS sativa*. C. B. P. 489. Garden Asparagus.

2. *ASPARAGUS sylvestris*, tenuissimo folio. C. B. P. 489. Wild Asparagus with narrow Leaves.

3. *ASPARAGUS maritimus*, crassiore folio. C. B. P. 489. Sea Asparagus with a thick Leaf.

4. *ASPARAGUS aculeatus*, spinis borridus. C. B. P. 490. Prickly Asparagus.

5. *ASPARAGUS foliis acutis*. C. B. P. Sharp leaved Asparagus.

6. *ASPARAGUS aculeatus alter*, tribus aut quatuor spinis ad eundem exortum. C. B. P. Another prickly Asparagus with three or four Spines rising at the same Place.

7. *ASPARAGUS aculeatus Africanus*. H. L. Prickly African Asparagus.

8. *ASPARAGUS aculeatus maximus farnetosus Zeylanicus*. H. L. The largest prickly bushy Asparagus of *Ceylon*.

9. *ASPARAGUS Hispanicus*, aculeis crassioribus borridus. Inst. R. H. Spanish Asparagus with terrible thick Prickles.

10. *ASPARAGUS Creticus fruticosus*, crassioribus & brevioribus aculeis, magno fructu. Tourn. Cor. Shrubby Asparagus of *Candy*, with thick and short Prickles, and large Fruit.

11. *ASPARAGUS orientalis*, foliis gallii. Tourn. Cor. Oriental Asparagus with Ladies Bed-straw Leaves.

12. *ASPARAGUS Africanus scandens*, myrti folio angustiore. Hort. Piss. Climbing African Asparagus with a narrow Myrtle-leaf.

The first Sort here mentioned is that which is generally cultivated in Gardens for the Use of the Table, whose tender Shoots are eaten in the Spring, and are much esteemed by all delicate Palates. The Culture of this Plant being exhibited at large in the former Volume of this Dictionary, I shall not repeat it in this.

The second Sort grows wild in the Fens of *Lincolnshire*, and some other Parts of *England*; but this producing very slender Shoots, is rarely cultivated in Gardens. Tho' a Friend of mine, who had cultivated this Sort for some Years, assured me, it was sweeter, and would come earlier in the Spring (without artificial Heat) than the Garden Kind.

All the other Sorts are preserved in the Gardens of those Persons who are Lovers of Botany for Variety. These may be all propagated by Seeds, which should be sown in Pots filled with light fresh Earth early in the Spring; these Pots may be placed on a moderate Hot-bed, which will greatly forward the Vegetation of the Seed: when the Plants begin to appear, they should be inured to the open Air by Degrees, and must be kept clear from Weeds, as also in dry Weather must be frequently refreshed with Water. In the Autumn these Pots must be either removed into the Green-house, or placed under a Hot-bed Frame, where they may be protected from Frost; for as they are Natives of warm Countries, so they will not endure the Cold of our Climate in Winter: the Spring following, just before the Plants begin to shoot, the Roots should be turned out of the Pots, and the Earth gently separated from them; then they should be parted, and as many of the best Roots as are intended to be preserved, should be planted each into a separate Pot filled with light fresh Earth, and then placed on a very moderate Hot-bed, covered only with Mats, just to promote their new Roots, and when the Weather is mild, they may be exposed to the open Air; these Plants may be placed abroad during the Summer Season, but in Winter they must be protected from hard Frost, which will otherwise destroy them. The only Culture which these Sorts require, is,

to shift them every Spring into fresh Earth just before they begin to shoot; and as their Roots increase in Magnitude, so they should be allowed larger Pots. In Summer they must be frequently watered, but in Winter, when their Green is decayed, they should not have too much Water, lest it rot them.

The last Sort never produces ripe Fruit in this Country, but it increases plentifully by Off-sets, which should be taken off in the Spring, before they shoot, otherwise they do not succeed so well. The Roots of this Sort are very subject to rot, where they have too much Wet in Winter.

ASPERUGO; Small wild Bugloss.

The Characters are;

It hath a Flower consisting of one Leaf, which is shaped like a Funnel, and cut into several Segments; out of whose Empalement rises the Pointal, fixed in the Bottom of the Flower, surrounded by four Embryo's, which afterwards become so many oblong Seeds, which ripen in the Empalement, that is much enlarged, whose Parts are then so closely contracted, that they adhere and cling together.

We have but one Sort of this Plant, which is,

ASPERUGO vulgaris. Inst. R. H. Small wild Bugloss, great Goose-grass, or German Madwort.

This is an annual Plant, which is found wild in some Parts of England, as near Newmarket, at Boxley in Suffex, and in Holy Island. It is preserved in the botanick Gardens for Variety; it may be easily propagated by Seeds, which should be sown in Autumn; for if the Seeds are kept out of the Ground till Spring, they do not succeed so well: when the Plants come up, they require no other Culture but to keep them clear from Weeds, and in May they will flower; in June their Seeds will be perfected, which if suffered to scatter, will grow again in Autumn; so that when this Plant is once brought into a Garden, it will maintain itself, provided it be allowed a Place.

ASPHODELUS; King's-spear.

The Species omitted in the former Volume are;

1. *ASPHODELUS albus ramosus minor*, seu *ramosus alter.* H. R. Par. Small white branched Asphodel, or King's-spear.

2. *ASPHODELUS purpurascens, foliis maculatis.* C. B. P. Purplish Asphodel with spotted Leaves.

3. *ASPHODELUS foliis compressis asperis, caule patulo.* Inst. R. H. Asphodel with rough compressed Leaves, and a spreading Stalk.

4. *ASPHODELUS Africanus angustifolius luteus minor.* Inst. R. H. Small yellow African Asphodel with narrow Leaves.

5. *ASPHODELUS spiralis luteus Italicus, flore magno.* H. R. Par. Yellow spiral Italian Asphodel with a large Flower.

6. *ASPHODELUS albus minimus.* C. B. P. Smallest white Asphodel.

7. *ASPHODELUS foliis fistulosis.* C. B. P. Asphodel with fistulous Leaves.

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8. *ASPHODELUS Creticus luteus serotinus patulus, folio aspero.* Tourn. Cor. Late yellow spreading Asphodel of Candy, with a rough Leaf.

All the Sorts of Asphodel are very pretty Ornaments for a Flower-garden, and requiring very little Trouble to cultivate them, renders them more acceptable. They may be all propagated by Seeds, which should be sown soon after they are ripe, on a warm Border of light fresh Earth; in the Spring the Plants will appear, when you should carefully clear them from Weeds, and in dry Weather they must be frequently watered; if this be duly observed, the Plants will have acquired Strength enough to be transplanted by the Michaelmas following; at which Time you must prepare a Bed of fresh Earth in the Flower-nursery, into which you should plant the Roots, at about six Inches Distance every Way; observing to plant them so low, as that the Top of the Roots may be three or four Inches under the Surface of the Bed; in this Bed they may remain one Year, during which Time they should be frequently refreshed with Water in dry Weather, and must be kept very clear from Weeds. In this Time the Roots will have acquired Strength enough to produce Flowers the following Year, so should at Michaelmas, when their Leaves are decayed, be carefully taken up, and transplanted into the Flower-garden, observing to place them in the middle of the Borders, amongst other hardy Kinds of Flowers, where being properly intermixed, they will make an agreeable Variety, and continue a long Time in Flower.

These Plants may also be propagated by parting of their Roots, but this must not be too often repeated, lest it weaken the Roots, and prevent their Flowering so strong as they otherwise would do. Once in three Years will be often enough to transplant the Roots, at which Times you may separate those which are grown large, so as to make two or three Roots of each; but do not part them too small, for that will so weaken them, as to prevent their flowering the following Summer. The best Time to transplant these Roots is at Michaelmas, just when their Leaves begin to decay.

ASTER; Starwort.

The Species omitted in the former Volume are;

10. *ASTER Novæ Angliæ, linariæ folio, chamæmeli flore.* Par. Bat. New-England Starwort, with Toad-flax Leaves; and Flowers like those of Camomil.

11. *ASTER Americanus, belvidera foliis, floribus ex cæruleo albicantibus, spicis prælongis.* Pluk. Phyt. tab. 78. f. 5. American Starwort, with Leaves like the Belvidere, and long Spikes of bluish white Flowers.

12. *ASTER serotinus ramosus alter, flore purpurascens.* H. R. Par. Another late-branch'd Starwort, with a purplish Flower.

13. *ASTER latifolius, tripolii flore.* H. R. Par. Broad-leav'd Starwort, with a Flower of Tripolium.

14. *ASTER tripolii flore, angustissimo et tenuissimo folio.* Flor. Bat. Starwort, with a *Tripolium* Flower, and very narrow slender Leaves.

15. *ASTER Canadensis subhirsutus, salicis folio, serotinus, flore cæruleo.* Inst. R. H. Late hairy *Canady* Starwort, with Willow Leaves, and a blue Flower.

16. *ASTER Atticus cæruleus minor.* Inst. R. H. Small blue *Attick* Starwort.

17. *ASTER hirsutus Austriacus, cæruleo magno flore, foliis subrotundis.* C. B. P. Hairy *Austrian* Starwort, with a large blue Flower, and roundish Leaves.

18. *ASTER montanus cæruleus, magno flore, foliis oblongis.* C. B. P. Blue Mountain Starwort, with a large Flower, and oblong Leaves.

19. *ASTER Alpinus, flore purpurascens.* Raii Hist. Alpine Starwort, with a purplish Flower.

20. *ASTER Atticus Alpinus alter.* C. B. P. Another *Attick* Starwort of the Alps.

21. *ASTER Atticus cæruleus major.* Inst. R. H. Greater blue *Attick* Starwort.

22. *ASTER maritimus palustris cæruleus, salicis folio.* Inst. R. H. Marsh or Sea Starwort, with Willow Leaves, commonly called *Tripolium*.

23. *ASTER Canadensis, foliis imis amplioribus cordatis et serratis.* D. Sarrazin. *Canady* Starwort, whose under-Leaves are broad, Heart-shaped, and serrated.

24. *ASTER virgæ aureæ latifolia folio subhirsuto, floribus fere umbellatis.* D. Sarrazin. Hairy Starwort, with broad Golden-rod Leaves, and Flowers growing almost in an Umbel.

25. *ASTER cæruleus ex PROVINCIA MARIANA, quasi perfoliatus floribus sparsis spicatis.* Pluk. Mantif. Blue Starwort from *Maryland*, whose Leaves almost surround the Stalk, and small Flowers growing in Spikes.

26. *ASTER annuus, caule villosa purpurascens, eryngii folio, flore maximo purpureo pulcherrimo, semine violaceo, Kiang-sita Sinensis.* Jussieu. Annual Starwort from *China*, with purple hairy Stalks, *Eryngo* Leaves, a beautiful large purple Flower, and a Violet-colour'd Seed.

27. *ASTER annuus, caule villosa virescente, eryngii folio, flore maximo albo.* Annual Starwort from *China*, with hairy greenish Stalks, *Eryngo* Leaves, and a large white Flower.

28. *ASTER Americanus, foliis pinnatis et serratis, floribus aurantiis.* Houst. *American* Starwort, with winged serrated Leaves, and Orange-colour'd Flowers.

29. *ASTER Americanus palustris, salicis folio serrato, floribus exiguis albidis.* Houst. Marsh *American* Starwort, with a serrated Willow Leaf, and small white Flowers.

30. *ASTER Americanus procumbens, bellidis minoris facie.* Houst. Trailing *American* Starwort, with the Face of the lesser *Daizy*.

31. *ASTER Africanus frutescens, lavendula folio, flore purpureo.* Hort. Amst. Shrubby *African* Starwort, with a Lavender Leaf, and a purple Flower.

32. *ASTER Africanus ramosus, hyssopi foliis, floribus cæruleis.* Olden. Inst. R. H. *African* branched Starwort, with *Hyssop* Leaves, and blue Flowers.

33. *ASTER Americanus frutescens, satureia foliis scabris, floribus amplis saturate violaceis.* Pluk. Alm. Shrubby *American* Starwort, with rough Savory Leaves, and large Violet-colour'd Flowers.

The twenty-five Sorts first mentioned, are all of them very hardy Plants, which will endure the severest Cold of our Climate in the full Ground. These are propagated by parting of their Roots, early in the Spring, before they begin to shoot; for, as many of the Sorts do not flower till late in the Autumn, so it will not be proper to transplant them after their Stems decay, which is seldom long before *Christmas*, therefore it is better to be done in *February*. But having in the former Volume given Directions for cultivating all these hardy Kinds, I shall not repeat it in this Place, but proceed to give Directions for cultivating the other Sorts.

The Seeds of the twenty-sixth Sort were sent from *China* to *Paris*, and sown in the Royal Garden there, whence this Plant hath been distributed to several curious Gardens in *Europe*, and is become one of the greatest Ornaments of the Flower-garden in Autumn. It begins to produce its Flowers the Beginning of *August*, and continues to produce new Flowers, until the Frost prevents it.

This Plant is propagated from Seed, which should be sown on a warm Border soon after it is ripe (for if it be kept 'till Spring, it seldom grows). The Plants will begin to appear early in the Spring, when they should be clear'd from Weeds, and in very dry Weather must be refresh'd with Water, which will forward their Growth; for during the first six Weeks or two Months after they come up, they make but small Progress. The Beginning of *May* these Plants will be fit to transplant, when they should be carefully drawn up, and planted in a Bed of rich Earth, six Inches asunder, observing to water them frequently in dry Weather, and to keep 'em constantly clear from Weeds. When these Plants are about four or five Inches high, they should be taken up with a Ball of Earth to their Roots, and transplanted, either into Pots, or into the Borders of the Flower-garden, where they are to remain, observing to water and shade them until they have taken Root; after which time those in the Borders will require no farther Care, but to keep them clear from Weeds; but those in the Pots must be frequently refresh'd with Water, otherwise they will not grow large, nor produce near so many Flowers. In *August* these Plants will produce their beautiful Flowers, which will continue 'till the End of *September*; at which time the Seeds will ripen, when (as was before directed) some of it should be sown on a warm Border; but it will be proper to save some of the Seed 'till Spring, lest, by a violent hard Winter, those sown in Autumn should be destroyed.

The twenty-seventh Sort is a Variety of the twenty-sixth, which accidentally rose from the same Seeds. This only differs from the former in the Colour of its Stalks and Flowers, which are white, so are not near so beautiful as the former, but for Variety a few of them may have Place in the Flower-garden.

This

This Plant is commonly called *Margarit*, by the French Gardeners.

The twenty-eighth, twenty-ninth, and thirtieth Sorts, were discovered by the late Dr. William Houstoun, near Vera-Cruz in the Spanish West-Indies. The twenty-eighth and thirtieth grows plentifully on the sandy Ground about Old Vera-Cruz; and the twenty-ninth, in watery Places near the Sea. These are all of them annual Plants, which may be propagated by sowing their Seeds in Pots filled with light fresh Earth, early in the Spring; and then plunge the Pots into a Hot-bed of Tanners-bark, observing to water them frequently, as the Earth in the Pots shall require it; and in very hot Weather you should shade the Glasses of the Hot-bed, during the Heat of the Day, to prevent the Earth from drying too fast. When the Plants are come up, they must be frequently refreshed with Water, and the Glasses of the Hot-bed should be raised with Stones in the Heat of the Day, to admit Air to the Plants, otherwise they will draw up very weak. When the Plants are about an Inch high, they should be carefully transplanted each into a separate Pot, filled with light fresh Earth, and then plunged into the Hot-bed again, observing to shade the Glasses until they have taken new Root; after which time they should have fresh Air admitted to them, by raising of the Glasses every Day, when the Weather will permit; you must also constantly supply them with Water, as you find the Earth in the Pots is dried. When the Plants have filled these Pots with their Roots, you must shift them carefully into Pots of a larger Size; and then plunge them into the Bark-bed in the Stove, where they will flower in August, and their Seeds will be perfected in September; after which the Plants decay.

The thirty-first, thirty-second and thirty-third Sorts, are abiding Plants, which grow to the Height of six or eight Feet, and become shrubby. These Plants may be propagated by Cuttings, which should be taken off in June, and planted into Pots filled with light fresh Earth, and plunged into a moderate Hot-bed, observing to water and shade them until they have taken Root; after which time they should be inured to bear the open Air by degrees. Toward the End of July they should be taken out of the Hot-bed, and placed amongst other exotick Plants, in a Situation where they may be defended from cold Winds; in this Place they may remain until the Beginning of October, when they should be removed into the Green-house, observing to place them where they may enjoy a large Share of Air in mild Weather; otherwise their Shoots will become weak, and they will not produce their Flowers strong, where their Shoots are too much drawn. These Plants must be removed out of the Green-house in the Spring, at the time when Orange Trees are taken out, and should be housed again about the same time as those are. In Winter they should be frequently watered, but it must not be given them in large Quantities

at that Season. In Summer they must be plentifully watered in dry Weather, which will cause them to flower very strong.

These produce their Flowers in Autumn, and continue in Beauty a long time; during which Season they afford an agreeable Prospect, and greatly add to the Variety, amongst other exotick Plants.

ASTEROIDES; Bastard Starwort.

The Characters are;

It hath a compound radiated Flower, whose Disk is composed of many Florets which are hermaphrodite, and of Semi-florets which are female, and rest upon the Embryo's, which are all included in a scaly Empalement. These Embryo's afterwards become Seed, for the most part oblong.

The Species are;

1. ASTEROIDES *Alpina, salicis folio*. Tourn. Cor. Bastard Starwort of the Alps, with a Willow Leaf.

2. ASTEROIDES *orientalis, petasitidis folio, flore maximo*. Tourn. Cor. Oriental Bastard Starwort, with a Butter-bur Leaf, and a large Flower.

3. ASTEROIDES *Americana minor annua*. Vaill. Lesser American Bastard annual Starwort.

The first of these Plants is pretty common in the English Gardens. This is a very hardy Plant, which is propagated by parting its Roots, (for it seldom produces good Seed in this Country); the best time to part the Roots is in October, about which time their Leaves decay. For if it be deferred till the Spring, and the following Season should prove dry, they will not flower so strong as those which were planted in Autumn, tho' they should be constantly supplied with Water. This Plant will thrive in almost any Soil or Situation, and continues to flower from June to September, which renders it worthy of a Place in every good Garden. This Plant is proper for large Borders, or to place under Groves of Trees, where if it be not too much shaded by the Trees, it will thrive very well, and add to the Variety. The Flowers are of a bright yellow Colour, and their Stems are about two Feet high, a great Number of which are produced from each Root, if they have sufficient Strength.

The second Sort was discovered by Dr. Tournefort in the Levant, and is at present rarely to be found in England. This may be propagated as the former Sort, but must have a warmer Situation; nor will it grow under the Drip of Trees. These Plants should not be transplanted oftner than every other Year, for when they are often parted and transplanted, they do not flower so well, nor make so large an Increase.

The third Sort is an annual Plant, which must be raised on a Hot-bed, and planted into Pots filled with light rich Earth, and brought forward on another Hot-bed, observing not to draw them up too weak; and in June they should be inured to bear the open Air by degrees, into which they should be removed toward

ward the End of the Month, and placed in a warm Situation, where they will flower in July, and their Seed will be perfected in September, soon after which time the Plants will decay.

ASTRAGALOIDES; Bastard Milk-Vetch.

The Characters are;

It hath a papilionaceous Flower, out of whose Empalement rises the Pointal, which afterwards becomes a Pod, shaped almost like a Boat, and full of Kidney-shap'd Seeds.

We have but one Sort of this Plant, which is;

ASTRAGALOIDES *Lusitanica*. Inst. R. H. Portugal Bastard Milk-Vetch.

This Plant is only propagated by Seeds, which should be sown in the Place where it is to remain; for this Plant has a long tap Root, which runs deep into the Ground, so that it is very difficult to transplant, so as to thrive well, especially if it be not done while the Plants are young; for I have seen Roots of this Plant, which have been four Feet long, and as large as a Man's Wrist. The Seeds of this Plant should be sown in March, on a Border of light fresh Earth; and when the Plants are come up, they should be thinned, where they grow too close to each other, and must be carefully weeded; for if they are not kept very clean while they are young, the Weeds will soon over-bear and destroy them. These Plants will require no other Culture, but only to dig about their Roots every Spring, just before they begin to shoot, being careful not to bruise or injure their Roots, and to make the Earth loose about them. In Summer they must be kept clear from Weeds; with this Management the Plants will thrive very well, but they will not flower until the third Year after sowing, but will continue to flower every Year after. The Stems of this Plant do usually rise three Feet high, the Flowers are produced in a long Spike, which are shaped like those of the *Lupine*, and come out on Branches, from the Wings of the Leaves, all the way up the Stalks. The Flowers appear first white, before they are fully blown out; afterwards they are of a dark yellow Colour, and continue near a Month before they fall off. This Plant rarely produces good Seeds in England, so that it must be procured from Abroad.

ASTRAGALUS; Milk-Vetch.

The Characters are;

It hath a papilionaceous Flower, consisting of the Standard, the Keel, and the Wings. Out of the Flower-cup arises the Pointal, covered with a Sheath, which afterward becomes a bicausal Pod, which is filled with Kidney-shap'd Seeds; to which Notes may be added, that the Leaves grow by Pairs along the middle Rib, with an odd one at the End.

The Species are;

1. ASTRAGALUS *luteus perennis procumbens vulgaris sive sylvestris*. Mor. Hist. Wild Liquorice or Liquorice-Vetch.

2. ASTRAGALUS *luteus annuus Monspeliacus procumbens*. Mor. Hist. Yellow annual trailing Milk-Vetch of Montpellier.

3. ASTRAGALUS *luteus perennis, siliqua gemella rotunda vesicam referente*. Mor. Yellow perennial Milk-Vetch, with a round Pod resembling a Bladder.

4. ASTRAGALUS *annuus maritimus procumbens latifolius, floribus pediculo insidentibus*. Tourn. Annual maritime trailing Milk-Vetch, with broad Leaves, and the Flowers sitting on Pedicles.

5. ASTRAGALUS *annuus angustifolius, flosculis pediculis oblongis insidentibus*. Tourn. Narrow-leav'd annual Milk-Vetch, whose Flowers stand on long Foot-stalks.

6. ASTRAGALUS *annuus angustifolius, flosculis subcaeruleis, cauliculis adhaerentibus*. Tourn. Narrow-leav'd annual Milk-Vetch, with bluish Flowers, adhering to the Stalks.

7. ASTRAGALUS *annuus procumbens, floribus glomeratis purpureis*. Boerb. Ind. Annual trailing Milk-Vetch, with purple Flowers growing in Clusters.

8. ASTRAGALUS *Alpinus procerior alopecuroides*. Tourn. Taller Fox-tail Milk-Vetch of the Alps.

9. ASTRAGALUS *pumilis, siliqua epiglottidis forma*. Tourn. Dwarf Milk-Vetch, with a Pod shaped like the Epiglottis.

10. ASTRAGALUS *montanus purpureus Anglicus*. Tourn. English purple Milk-Vetch of the Mountains.

11. ASTRAGALUS *Alpinus, tragacanthæ folio, vesicarius*. Tourn. Bladder Milk-Vetch of the Alps, with a Goat's-Thorn Leaf.

12. ASTRAGALUS *Alpinus, tragacanthæ folio, ramosus, flore caeruleo glomerato*. Tourn. Branched Milk-Vetch of the Alps, with a Goat's-Thorn Leaf, and blue glomerated Flowers.

13. ASTRAGALUS *orientalis altissimus, galegæ foliis amplioribus, flore parvo flavescente*. Tourn. Cor. Tallest Eastern Milk-Vetch, with ample Goat's-rue Leaves, and a small yellowish Flower.

14. ASTRAGALUS *orientalis altissimus, fraxini folio, flore viridi flavescente*. Tourn. Cor. Tallest Eastern Milk-Vetch, with an Ash Leaf, and a greenish yellow Flower.

15. ASTRAGALUS *orientalis maximus incanus erectus, caule ab imo ad summum florido*. Tourn. Cor. Greatest hoary upright Milk-Vetch, with a Stalk flowering from the Bottom to the Top.

16. ASTRAGALUS *Canadensis, flore viridi flavescente*. Acad. Reg. Scien. Milk-Vetch of Canady, with a greenish yellow Flower.

The first Sort is very common in divers Parts of England, and is seldom preserved in Gardens. This dies to the Root every Winter, and rises again the following Spring. It flowers in June, and the Seeds are ripe in August. This may be propagated by sowing the Seeds in the Spring, upon almost any Soil, or in any Situation, and requires no farther Care but to keep it clear from Weeds.

The tenth Sort grows wild in several Parts of England, but is not so common as the former.

former. This may be propagated in the same manner as the former.

The second, fourth, fifth, sixth and seventh Sorts are annual Plants. These may be propagated by sowing of their Seeds in *March* upon a Bed of light fresh Earth, in an open Situation; and when the Plants are come up, they should be thinn'd, leaving them about a Foot asunder; after this there will be no other Trouble but to keep 'em clear from Weeds. These will produce their Flowers in Summer, and in Autumn their Seeds will be perfected.

The other Sorts are all abiding Plants, but must be propagated by sowing of their Seeds towards the latter End of *March*, on a Bed of fresh light Earth, observing not to bury the Seeds too deep, lest they rot; and when the Plants are come up, they should be thinned, leaving them about six Inches asunder; and during the Summer following you should constantly keep 'em clear from Weeds. In *October* you may transplant these Plants into the Borders where they are to remain, in doing of which you should be careful to dig to the Bottom of their Roots; for most of them send forth long tap Roots; which go deep into the Earth, and, if cut or broken, rarely overcome it. These Plants, many of them, grow very tall, and should be allowed a great Share of Room. The fifteenth Sort is a beautiful Plant; it grows about four Feet high, and produces Flowers from the Bottom to the Top of the Stems, so that it makes a fine Appearance in a large Border. The sixteenth Sort is somewhat tender, and is often destroyed in severe Frost, but in mild Winters it will stand abroad very well.

ASTRANTIA; Masterwort.

The Characters are;

It hath a rose and umbellated Flower, consisting of several Leaves; the Apices are for the most part reflexed, and are placed orbicularly on the Flower-cup; this afterwards becomes a Fruit, composed of two Seeds, each of which is covered with a furrow'd Husk: to these Notes must be added, the Flowers are collected into a Head, surrounded with a Circle of Leaves.

The Species are;

1. *ASTRANTIA major, corona floris purpurea-scens*. Tourn. Black Masterwort, with purplish Flowers.

2. *ASTRANTIA major, corona floris candida*. Tourn. Greater Masterwort, with white Flowers.

These Plants are both very hardy: They may be propagated either by sowing of their Seeds, or parting their Roots. If they are propagated from Seeds, they should be sown early in the Spring, or in Autumn, soon after the Seeds are ripe, on a shady Border; and when the Plants are come up, they should be carefully weeded, and where they are too close, some of the Plants should be drawn out, to allow Room for the others to grow, until *Michaelmas*, when they should be transplanted where they are to remain; which should always be in a moist Soil, and a shady Situation. The Distance these Plants should be placed is two Feet, for their

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Roots will spread to a considerable Width, if they are permitted to remain some Years in the same Place. They require no other Culture, but to keep 'em clear from Weeds, and every third or fourth Year taken up at *Michaelmas*, and their Roots parted and planted again. These Plants are seldom preserved but in botanick Gardens, there being no great Beauty in their Flowers, nor are they used in Medicine at present; tho' by some Persons they have been called *Black Hellebore*, and I believe have been used for that.

ATRIPLEX; Orrach.

The Characters are;

It hath no Leaves to the Flower, but consists of many Stamina, which arise from a five-leav'd Empalement; the Pointal afterwards becomes the Seed, which is flat and orbicular, and is inclosed in the Empalement, which becomes a foliaceous Capsule, in which are included two Sorts of Seeds.

The Species are;

1. *ATRIPLEX hortensis alba, frve pallide vi-rens*. C. B. P. Garden Orrach, of a pale green Colour.

2. *ATRIPLEX hortensis nigricans*. C. B. P. Dark green Garden Orrach.

3. *ATRIPLEX hortensis rubra*. C. B. P. Red Garden Orrach.

4. *ATRIPLEX latifolia, frve Halimus fruticofus*. Mor. Hist. Shrubby broad-leav'd Orrach, commonly called *Sea-purslane-tree*.

5. *ATRIPLEX maritima fruticosa, Halimus & Portulaca marina dicta, angustifolia*. Raii Syn. Shrubby Sea Orrach, commonly called *Sea-purslane*, with a narrow Leaf.

6. *ATRIPLEX maritima laciniata*. C. B. P. Sea Orrach, with jagged Leaves.

7. *ATRIPLEX angusto oblongo folio*. C. B. P. Long narrow-leav'd Orrach.

8. *ATRIPLEX angustissimo & longissimo folio*. H. L. Orrach, with very long narrow Leaves.

9. *ATRIPLEX sylvestris, fructu compresso roseo & stellato*. C. B. Prod. Wild Orrach, with a compressed starry and rose-shap'd Fruit.

10. *ATRIPLEX Cretica maritima erecta, folio triangulari*. Tourn. Cor. Upright Sea Candy Orrach, with a triangular Leaf.

11. *ATRIPLEX Græca fruticosa humifusa, balimi folio*. Tourn. Cor. Dwarf shrubby Orrach, with a Sea-purslane Leaf.

12. *ATRIPLEX orientalis frutescens, folio amplissimo argenteo*. Tourn. Cor. Shrubby Oriental Orrach, with a large Silver-colour'd Leaf.

13. *ATRIPLEX orientalis, frutex aculeatus, flore pulchro*. Tourn. Cor. Shrubby prickly Oriental Orrach, with a fair Flower.

The first of these Plants was formerly cultivated in the Kitchen-Gardens, as a culinary Herb, being used as Spinage, and is by some Persons preferred to it, tho' in general it is not esteemed amongst the *English*; but the *French* now cultivate this Plant for Use.

The second and third Sorts are believed to be Varieties of the first, for they differ in nothing from that, but in the Colour of their Stalks and Leaves; however, this Difference is not accidental, for I have several Years culti-

vated all the three Sorts in the same Soil, and they have always retained their Difference from Seeds, and have not interchanged, as most Varieties generally do.

These Plants are annual, so must be sown for Use early in the Spring, or at *Michaelmas*, soon after the Seeds are ripe; at which time it generally succeeds better than when it is sown in the Spring, and will be fit for Use at least a Month earlier in the Spring. These Plants require no other Culture, but to hough them when they are about an Inch high, to cut them down where they are too thick, leaving them about four Inches asunder, and to cut down all the Weeds. This must be done in dry Weather, otherwise the Weeds will take Root again, and render your Work of no Use. When your Plants are grown about four Inches high, it will be proper to hough them a second time, in order to clear them from Weeds; and if you observe the Plants are left too close in any Part, you must then cut them out. If this be well perform'd, and in dry Weather, the Ground will remain clean until the Plant is fit for Use. Where these Plants are sown on a rich Soil, and allowed a good Distance, the Leaves will be very large, in which the Goodness of the Herb consists. This must be eaten while it is young, for when the Stalks become tough, it is good for nothing. Some few Plants of each Kind may be permitted to stand for Seed, to preserve their Kinds, which will ripen in *August*, and may then be cut and laid on a Cloth to dry, after which the Seeds may be beaten out, and put up for Use. The first Sort is ordered by the College of Physicians for medicinal Use.

The fourth Sort was formerly cultivated in Gardens as a Shrub, and by some Persons they were formed into Hedges, and constantly sheer'd to keep them thick; but I do not approve of this Plant for such Purposes, on many Accounts, for it is too vigorous; the Shoots, in one Month, at the growing Season of the Year, will be two Feet long, provided they have a good Soil, so that a Hedge of this Plant cannot be kept in tolerable Order, nor will it ever form a thick Hedge. But a worse Inconvenience attends this Plant, for in very hard Winters it is often destroyed, as also in very dry Summers many of the Plants will decay, whereby there will become large Gaps in the Hedge.

But although this Plant be not proper for Hedges, yet it may have a Place in Wilderness Quarters, where it will serve to thicken, and the Silver-coloured Leaves will add to the Variety, amongst other Shrubs of the same Growth. This will grow eight or ten Feet high, and if suffered to grow wild without pruning, will spread several Feet in Compass, and will sometimes produce Flowers.

It may be propagated by Cuttings, which may be planted in any of the Summer Months, on a shady Border, where, if they are duly watered, they will soon take Root, and will be fit to transplant the *Michaelmas* following, when they should be planted where they are to remain; for they do not succeed well in trans-

planting, when they are grown pretty large and woody.

The fifth Sort grows wild in divers Parts of *England* on the Sea-side, from whence the Plants may be procured; or it may be propagated by Cuttings, in the same manner as the former Sort. This is a low Under-shrub, seldom rising above two Feet and an half, or at most three Feet high; but becomes very bushy. The Leaves of this Kind are narrow, and of a whitish Colour, but are not so white as those of the former. This may have a Place amongst other low Shrubs; and if planted on a poor gravelly Soil, will abide several Years, and make a pretty Diversity.

The sixth, seventh, eighth and ninth Sorts grow wild in *England* and *Holland*, and are seldom preserved but in botanick Gardens, for the sake of Variety. These are propagated by Seeds, which may be sown soon after they are ripe, when they will succeed much better than if they are sown in the Spring. When the Plants are come up, they should be thinned, so as to leave them four or five Inches distant, and kept clear from Weeds, which is all the Culture they require.

The tenth, eleventh, twelfth and thirteenth Sorts were discovered by Dr. *Tournefort* in the *Levant*, who sent their Seeds to the Royal Garden at *Paris*, from whence they have been communicated to several Gardens in *Holland* and *England*. The tenth Sort may be propagated by Seeds as the four former Sorts, but must have a warmer Situation, otherwise it will not perfect Seeds in this Country.

The other three Sorts may be propagated by Seeds, or by Cuttings, planted on a shady Border, as was directed for the fourth and fifth Sorts. These must be planted in Pots, and sheltered in Winter under a Garden-frame, where they may have as much free Air as possible in mild Weather; but in hard Frost they must be sheltered, otherwise it will destroy them. Some of these Plants may be planted on a warm Border, in a poor gravelly Soil, where they will endure the Cold of our ordinary Winters very well, and will make a pretty Variety amongst Plants of the same Growth. The eleventh Sort will seldom rise above two Feet high, but the twelfth and thirteenth Sorts will grow to be six or seven Feet high.

AVENA; Oats.

The Characters are;

It is of the Grass-leav'd Tribe; the Flowers have no Petals, and are disposed in a loose Panicle; the Grain is eatable.

The Species are;

1. AVENA *vulgaris seu alba*. C. B. P. Common or white Oats.

2. AVENA *nigra*. C. B. P. Black Oats.

3. AVENA *nuda*. C. B. P. Naked Oats.

The first Sort here mentioned is the most common in *England*; the second Sort being much less esteemed, the white being the heavier Grain, and makes whiter Meal. The third Sort is less common than either of the former, especially in the Southern Parts of *England*; but in the North of *England*, *Scotland*,

land, and *Wales*, it is cultivated in plenty. This Sort is esteemed, because the Grain threshes clean out of the Husk, and need not be carried to the Mill to be made into Oatmeal or Grist. An Acre of Ground doth not yield so many Bushels of these, as of the common Oats, by Reason the Grain is small and naked, and goes near in Measure; but what is wanting in the Measure, is supplied in Value.

Oats are a very profitable Grain, and absolutely necessary, being the principal Grain which Horses love; and are esteemed the most wholesome Food for those Cattle, being sweet, and of an opening Nature; other Grains being apt to bind, which is injurious to labouring Horses. But if you feed them with this Grain, soon after they are housed, before they have sweat in the Mow, or are otherwise dried, it is as bad on the other hand; for they are then too laxative.

This Grain is a great Improvement to many Estates in the North of *England*, *Scotland*, and *Wales*; for it will thrive on cold barren Soils, which will produce no other Sort of Grain; it will also thrive on the hottest Land. In short, there is no Soil too rich or too poor for it, too hot or too cold for it. And in wet Harvests when other Grain is spoil'd, this will receive little or no Damage; the Straw and Husks being of so dry a Nature, that if they are housed wet, they will not heat in the Mow, or become mouldy as other Grain usually do, so is of great Advantage in the Northern Parts of *England*, and in *Scotland*, where their Harvest is generally late, and the Autumns wet.

The Meal of this Grain makes tolerable good Bread, and is the common Food of the Country People in the North. In the South it is esteemed for Pottage and other Messes, and in some Places they make Beer with this Grain.

The best time for sowing of Oats is in *February* or *March*, according as the Season is early or late, and sometimes I have known it sown in *April*, and has been early ripe. The Manner of preparing the Ground, as also of sowing the Grain, being the same as for other Corn, I shall not mention it in this Place.

AVENUE;

The old Method of planting *Avenues*, with regular Rows of Trees, is what has been generally practised till of late Years, since the old manner of laying out Gardens being with good Reason disused, they have also introduced a more magnificent Method of planting *Avenues*; which is to plant the Trees in Clumps, or Platoons, making the Opening much wider than before; and place the Clumps of Trees at about three hundred Feet distance from each other. In each of these Clumps, should be planted seven, or nine Trees, according to the Fancy of the Owner, or the Person who designs the Plantation; in doing of this, there must be Care taken to range the Trees, on the Inside of the *Avenue*, so as that, when a Person is at one End, the whole may appear in a strait Line. But this is only to be practis'd where the *Avenue* is of a tolerable Length; for in short Walks it will not appear so slightly as

even Rows of Trees. In large Parks this Method of planting of Trees in Clumps has a very good Effect; for as a Person rides thro' the *Avenue*, the Openings between the Trees to the Turf where the Deer are feeding, are much more agreeable, than in passing between strait Rows of Trees. The Trees should be planted about thirty Feet asunder in the Clumps, and a little Ditch thrown up round each Clump, to prevent the Deer from coming to bark them.

To the Article of AURANTIUM add;

These Trees being new potted or tubbed every Year, those Years in which they are not shifted, you must in *April* observe to take out as much of the old Earth from the Tops of the Pots and Tubs, and also round the Sides of them, as possible, without injuring the Roots of the Trees, and fill them up with fresh Earth. You must also wash and clean their Stems and Leaves from Filth, which will greatly strengthen their Flowering, and cause them to shoot vigorously the following Summer.

In the Management of Orange-trees which are in good Health, the chief Care should be to supply them with Water duly, and not (as is sometimes practis'd) starve them in Winter, whereby their Fibres are dried, and become mouldy, to the great Prejudice of the Trees; nor to give them Water in too great Abundance: but rather let their Waterings be frequent, and given in moderate Quantities. You must also observe that the Water has free Passage to drain off; for if it be detained in the Tubs or Pots, it will rot the tender Fibres of the Trees. During the Winter Season they must have a large Share of Air, when the Weather is favourable; for nothing is more injurious to these Trees, than stifling of them; nor should they be placed too near each other in the Green-house, but set them at such Distance, that their Branches may be clear of each other, and that the Air may circulate freely round their Heads. In Summer they should be placed where the Winds are not violent, and to have the Morning and Evening Sun; for if they are too much exposed to the Mid-day Sun, they will not thrive. The best Situation for them is near some large Plantation of Trees, which will break the Force of the Winds, and screen them from the violent Heat of the Sun. In such a Situation they may remain until the Beginning of *October*, or later, according as the Season proves favourable; for if they are carried into the Green-house early, and the Autumn should prove warm, it will occasion the Trees to make fresh Shoots, which will be weak and tender, and liable to perish in Winter, and sometimes it will occasion the flowering in Winter, which greatly weakens the Trees.

The *Shaddock* and *Citron* are much tenderer than either the *Orange* or *Lemon*, so should be set into the Green-house sooner, and have a warmer Situation in Winter, otherwise their Fruit will all drop off.

The best Compost for Orange-trees, is, two thirds of fresh Earth from a good Pasture, which should not be too light, nor over stiff, but rather a hazel Loam; this should be taken about

about ten Inches deep with the Sward, which should be mixed with the Earth to rot, and one third part of Neats-dung; these should be mixed together, at least twelve Months before it is used, observing to turn it over every Month, to mix it well, and to rot the Sward; this will also break the Clods, and cause the Mould to be finer. Before you make use of this Earth, you should pass it thro' a rough Screen, to separate the great Stones, and the Roots of the Sward therefrom; but by no means sift the Earth too fine, for this is very prejudicial to most Plants, but particularly to Orange-trees.

To the Article AZEDARACH add;

2. AZEDARACH *sempervirens* & *florens*. *Tourn.* The Bead-tree which is alway green and flowering.

This Plant is at present very rare in England, being in very few Gardens; this is much tenderer than the common Sort: it is propagated by Seeds, which must be sown on a Hot-bed in the Spring; and when the Plants are come up two or three Inches high, they must be transplanted, each into a small half-penny Pot, filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which they must have Air and Water in Proportion to the Warmth of the Season, or the Bed in which they stand. In this Bed they may remain until *Michaelmas*, when the Pots must be removed into the Stove, where they must have a moderate Share of Heat, and be often refreshed with Water. The Spring following they must be removed into larger Pots, and if they are plunged into a moderate Hot-bed to facilitate their taking Root, it will greatly promote their Growth; but they should not remain too long in this Bed, nor be too much drawn, which will weaken them. As the Summer advances, so they should be inured by Degrees to bear the open Air, into which they should be removed in *June*, observing to place them where they may be screen'd from strong Winds, and not too much exposed to the Mid-day Sun. In this Situation they may remain till *Michaelmas*, when they must be removed into the Stove, and managed during the Winter Season, as was directed for the foregoing Winter; and as the Plants grow large, they will be more hardy, when a small Share of Heat will preserve them in Winter, and in Summer they may be exposed in a well sheltered Situation. With this Management they will produce Flowers extremely well, and sometimes they will ripen their Fruit in Europe.

The common Sort has flowered three or four Years successively in the Physick-Garden, and the last Season there was a good Quantity of Fruit on several Plants, but they were not perfected; but as these Plants are young, they cannot nourish the Fruit so well as those which are well grown, so I doubt not but in a few Years they may produce ripe Fruit in England.

BANISTERA, *Houft.*

This was so called from a famous Botanist, who lost his Life in the Search of Plants in Virginia, so we have no English Name for the Plant.

The Characters are;

It hath a papilionaceous Flower, which is succeeded by one naked Seed, whose outer Membrane is extended into a winged Leaf, after the Manner of the Maple Seed.

The Species are;

1. BANISTERA *Americana scandens, foliis laurinis. Houft.* Climbing Banistera with Laurel Leaves.

2. BANISTERA *Americana scandens, folio subrotundo, flore ex aureo coccineo. Houft.* Climbing American Banistera, with a roundish Leaf, and a Flower from Gold to a scarlet Colour.

3. BANISTERA *Americana scandens, foliis citri, flore caeruleo spicato. Houft.* Climbing American Banistera, with a blue spiked Flower.

4. BANISTERA *Americana scandens, foliis subrotundis, subtus pubescentibus. Houft.* Climbing American Banistera, with roundish Leaves, of a whitish Colour underneath.

5. BANISTERA *Americana scandens, Pseudoacaciae folio, flore purpurascete. Houft.* Climbing American Banistera, with a bastard Acacia Leaf, and a purplish Flower.

These Plants are all of them Natives in the warmest Parts of America, where they grow in the Woods, and twist themselves round the Trunks of other Trees or Plants which grow near them, some of them growing four or five Feet high, and others will rise to the Height of ten, twelve, or fourteen Feet; but must be supported by other Plants, for they do not grow erect.

The first, second and third Sorts grow plentifully in the Woods in Jamaica, but the other two Sorts were collected by the late Dr. William Houstoun, at Carthagen in the Spanish West-Indies. These Plants were called Maples, by Sir Hans Sloane and Father Plumier, from the Resemblance which their Seeds have to those of the Maple; but the Flower differing so remarkably from that of the Maple, the late Dr. Houstoun, with good reason, separated it from that Genus, and gave the Name of Banistera to them.

These Plants may be propagated by Seeds which must be procured from the Places of their Growth. The surest Method to succeed, is, to take the Seeds when they are fully ripe, and put them into a Tub of Earth or Sand, (for if they are brought over dry, they will not grow): when the Seeds arrive, they should be immediately sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tan-

Tanners-bark, observing to keep the Earth constantly moist. These Seeds will sometimes lye several Months in the Ground, before they shoot, and at other times they will come up in a Month or five Weeks after sowing. When the Plants begin to appear, they must be duly watered, and constantly kept clear from Weeds, and in warm Weather the Glasses should be raised to admit fresh Air to the Plants. When they are about two Inches high, they should be carefully shaken out of the Pots, and parted, planting each into a separate small Pot, and then plunged into the Hot-bed again, observing to water and shade them until they have taken new Root; after which time they must have a large Share of fresh Air in warm Weather, and must be frequently watered.

When the Plants have filled these small Pots with their Roots, they should be shaken out, and transplanted into Pots of a larger Size; and must be plunged into the Bark-bed again. When they are grown too tall to remain under the Glasses of the Hot-bed, they must be removed into the Bark-stove, and placed amongst other tender exotick Plants, where if they thrive well, they will produce Flowers in two or three Years.

BARBA-JOVIS, Silver-Bush, or Jupiter's-Beard.

The Species omitted in the former Volume are;

5. BARBA-JOVIS *Græca, linariæ folio argenteo ampliori, flore luteo parvo.* Tourn. Cor. Greek Jupiter's-Beard, with a silver toad-flax Leaf, and small yellow Flowers.

6. BARBA-JOVIS *Americana annua humilis, ramosissima, floribus spicatis cæruleis.* Dwarf annual American Jupiter's-Beard, with blue Flowers growing in a Spike.

7. BARBA-JOVIS *Americana scandens, floribus cæruleis, ad alas foliorum conglobatis.* Climbing American Jupiter's-Beard, with blue Flowers coming out from the Wings of the Leaves.

8. BARBA-JOVIS *Americana humilis rotundifolia & villosa flore vario.* Houst. Dwarf American Jupiter's-Beard, with round hairy Leaves, and a variable Flower.

9. BARBA-JOVIS *Cretica frutescens incana, flore spicato purpureo amplo.* Breyn. Prod. 2. Shrubby Jupiter's-Beard of Crete, with white Leaves, and large purple Flowers growing in a Spike.

The fifth and ninth Sorts were discovered by Dr. Thurnesfort in the Archipelago, and were brought to the Royal Garden at Paris, from whence they have been distributed to several of the European Gardens: These may be propagated in the same Manner as the first Sort, and require the same Culture.

The sixth Sort is an annual Plant, which was discovered by Dr. William Houstoun at Campechy. This is only propagated by Seeds, which must be sown very early in the Spring on a good Hot-bed; and when the Plants are come up two Inches high, they should be each transplanted into a small Pot filled with fresh light Earth, and plunged into a Hot-bed of Tanners-

bark, observing to water and shade them until they have taken Root, after which time they should have Air and Water in Proportion to the Heat of the Season. In July these Plants will flower, and if the Plants are preserved either in the Stove or under Glasses, they will perfect their Seeds in September, and soon after they will decay.

The seventh and eighth Sorts may be propagated from Seeds, which must be sown as hath been directed for the sixth; but these are abiding Plants, which must be placed in the Stove amongst other American Plants, and will produce their Flowers every Year.

BARLERIA.

This Name was given to this Genus of Plants by Father Plumier, in honour of Jacobus Barelher of Paris, who was a famous Botanist. We have no English Name for it, but the Inhabitants of the Island of Jamaica call it Snap-dragon.

The Characters are;

It hath a personated Flower, consisting of one Leaf, whose upper Lip or Crest is erect, but the under is divided into three Parts; from whose Empalement rises the Pointal in the binder Part of the Flower, which afterwards becomes a quadrangular oblong membranaceous Fruit, with one Capsule in which are lodged flat roundish Seeds.

The Species are;

1. BARLERIA *solani folio, flore coccinea.* Plum. Nov. Gen. Barleria with a Night-shade Leaf, and a scarlet Flower.

2. BARLERIA *aculeata, solani folio angustiore, flore cæruleo.* Plum. Nov. Gen. Prickly Barleria, with a narrow Night-shade Leaf, and a blue Flower.

The first of these Plants is very common in Jamaica, and several other Parts of the West-Indies, but at present it is very rare in England. It grows to the Height of three or four Feet, and divides into many slender Branches, which are hoary. On the Top of the Branches come out the Flowers, which are of a fine red Colour, and shaped like those of the *Antirrhinum* or Calves-snout; these Flowers are succeeded by quadrangular Seed-vessels, which are about an Inch long, which contain a great Number of flat brown Seeds. These Seeds when ripe, are cast out with Violence on their Vessels being touched.

The second Sort is less common in Jamaica than the first, but it grows in great Plenty on some of the French Islands in America. This doth not rise above two Feet high; the Leaves are narrower than those of the former Sort, and the Flowers are of a fine blue Colour.

These Plants are propagated by Seeds, which should be carefully gathered when ripe, and must be sown in Pots filled with light fresh Earth early in the Spring; these Pots must be plunged into a Hot-bed of Tanners-bark, and should be frequently watered; but this must be done with great Caution, otherwise the Seeds may be washed out of the Earth. In about a Month's time the Plants will begin to appear, when they should be watered two or three times a Week, according as the Earth in the Pots

about ten Inches deep with the Sward, which should be mixed with the Earth to rot, and one third part of Neats-dung; these should be mixed together, at least twelve Months before it is used, observing to turn it over every Month, to mix it well, and to rot the Sward; this will also break the Clods, and cause the Mould to be finer. Before you make use of this Earth, you should pass it thro' a rough Screen, to separate the great Stones, and the Roots of the Sward therefrom; but by no means sift the Earth too fine, for this is very prejudicial to most Plants, but particularly to Orange-trees.

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5. BANISTERA *Americana scandens, Pseudoacaciae folio, flore purpurascens.* Houst. Climbing American Banistera, with a bastard Acacia Leaf, and a purplish Flower.

These Plants are all of them Natives in the warmest Parts of America, where they grow in the Woods, and twist themselves round the Trunks of other Trees or Plants which grow near them, some of them growing four or five Feet high, and others will rise to the Height of ten, twelve, or fourteen Feet; but must be supported by other Plants, for they do not grow erect.

The first, second and third Sorts grow plentifully in the Woods in Jamaica, but the other two Sorts were collected by the late Dr. William Houstoun, at Carthage in the Spanish West-Indies. These Plants were called Maples, by Sir Hans Sloane and Father Plumier, from the Resemblance which their Seeds have to those of the Maple; but the Flower differing so remarkably from that of the Maple, the late Dr. Houstoun, with good reason, separated it from that Genus, and gave the Name of Banistera to them.

These Plants may be propagated by Seeds which must be procured from the Places of their Growth. The surest Method to succeed, is, to take the Seeds when they are fully ripe, and put them into a Tub of Earth or Sand, (for if they are brought over dry, they will not grow): when the Seeds arrive, they should be immediately sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tan-

Tanners-bark, observing to keep the Earth constantly moist. These Seeds will sometimes lye several Months in the Ground, before they shoot, and at other times they will come up in a Month or five Weeks after sowing. When the Plants begin to appear, they must be duly watered, and constantly kept clear from Weeds, and in warm Weather the Glasses should be raised to admit fresh Air to the Plants. When they are about two Inches high, they should be carefully shaken out of the Pots, and parted, planting each into a separate small Pot, and then plunged into the Hot-bed again, observing to water and shade them until they have taken new Root; after which time they must have a large Share of fresh Air in warm Weather, and must be frequently watered.

When the Plants have filled these small Pots with their Roots, they should be shaken out, and transplanted into Pots of a larger Size; and must be plunged into the Bark-bed again. When they are grown too tall to remain under the Glasses of the Hot-bed, they must be removed into the Bark-stove, and placed amongst other tender exotick Plants, where if they thrive well, they will produce Flowers in two or three Years.

BARBA-JOVIS, Silver-Bush, or Jupiter's-Beard.

The Species omitted in the former Volume are;

5. *BARBA-JOVIS Græca, linariæ folio argenteo ampliori, flore luteo parvo.* Tourn. Cor. Greek Jupiter's-Beard, with a silver toad-flax Leaf, and small yellow Flowers.

6. *BARBA-JOVIS Americana annua humilis, ramosissima, floribus spicatis cæruleis.* Dwarf annual American Jupiter's-Beard, with blue Flowers growing in a Spike.

7. *BARBA-JOVIS Americana scandens, floribus cæruleis, ad alas foliorum conglobatis.* Climbing American Jupiter's-Beard, with blue Flowers coming out from the Wings of the Leaves.

8. *BARBA-JOVIS Americana humilis rotundifolia & villosa flore vario.* Houst. Dwarf American Jupiter's-Beard, with round hairy Leaves, and a variable Flower.

9. *BARBA-JOVIS Cretica frutescens incana, flore spicato purpureo amplo.* Breyn. Prod. 2. Shrubby Jupiter's-Beard of Crete, with white Leaves, and large purple Flowers growing in a Spike.

The fifth and ninth Sorts were discovered by Dr. Thurnefort in the Archipelago, and were brought to the Royal Garden at Paris, from whence they have been distributed to several of the European Gardens: These may be propagated in the same Manner as the first Sort, and require the same Culture.

The sixth Sort is an annual Plant, which was discovered by Dr. William Houstoun at Campechy. This is only propagated by Seeds, which must be sown very early in the Spring on a good Hot-bed; and when the Plants are come up two Inches high, they should be each transplanted into a small Pot filled with fresh light Earth, and plunged into a Hot-bed of Tanners-

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bark, observing to water and shade them until they have taken Root, after which time they should have Air and Water in Proportion to the Heat of the Season. In July these Plants will flower, and if the Plants are preserved either in the Stove or under Glasses, they will perfect their Seeds in September, and soon after they will decay.

The seventh and eighth Sorts may be propagated from Seeds, which must be sown as hath been directed for the sixth; but these are abiding Plants, which must be placed in the Stove amongst other American Plants, and will produce their Flowers every Year.

BARLERIA.

This Name was given to this Genus of Plants by Father Plumier, in honour of Jacobus Barelrier of Paris, who was a famous Botanist. We have no English Name for it, but the Inhabitants of the Island of Jamaica call it Snapdragon.

The Characters are;

It hath a personated Flower, consisting of one Leaf, whose upper Lip or Crest is erect, but the under is divided into three Parts; from whose Empalement rises the Pointal in the binder Part of the Flower, which afterwards becomes a quadrangular oblong membranaceous Fruit, with one Capsule in which are lodged flat roundish Seeds.

The Species are;

1. *BARLERIA solani folio, flore coccinea.* Plum. Nov. Gen. Barleria with a Night-shade Leaf, and a scarlet Flower.

2. *BARLERIA aculeata, solani folio angustiore, flore cæruleo.* Plum. Nov. Gen. Prickly Barleria, with a narrow Night-shade Leaf, and a blue Flower.

The first of these Plants is very common in Jamaica, and several other Parts of the West-Indies, but at present it is very rare in England. It grows to the Height of three or four Feet, and divides into many slender Branches, which are hoary. On the Top of the Branches come out the Flowers, which are of a fine red Colour, and shaped like those of the *Antirrhinum* or Calves-snout; these Flowers are succeeded by quadrangular Seed-vessels, which are about an Inch long, which contain a great Number of flat brown Seeds. These Seeds when ripe, are cast out with Violence on their Vessels being touched.

The second Sort is less common in Jamaica than the first, but it grows in great Plenty on some of the French Islands in America. This doth not rise above two Feet high; the Leaves are narrower than those of the former Sort, and the Flowers are of a fine blue Colour.

These Plants are propagated by Seeds, which should be carefully gathered when ripe, and must be sown in Pots filled with light fresh Earth early in the Spring; these Pots must be plunged into a Hot-bed of Tanners-bark, and should be frequently watered; but this must be done with great Caution, otherwise the Seeds may be washed out of the Earth. In about a Month's time the Plants will begin to appear, when they should be watered two or three times a Week, according as the Earth in the Pots

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shall

shall become dry. In very warm Weather the Glasses of the Hot-bed should be raised, in order to admit fresh Air to the Plants, as also to let out the Steam which may arise from the Bed: but if the Nights are cold, the Glasses should be covered with Mats, to preserve a gentle Warmth in the Bed; otherwise the Plants will starve.

When the Plants are about an Inch high, they should be carefully shaken out of the Seed-pots, and each planted into a separate Half-penny Pot, filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root; after which time they should have the Glasses of the Hot-bed raised every Day, in Proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed. You must also water them frequently, but you must observe to let the Water fall gently on them, otherwise you will destroy the Plants when they are small.

In two Months after their removing (if the Plants have thriven) they will have filled the small Pots with their Roots; therefore they should be shaken out of those Pots, and their Roots trimmed, and then put into Penny-pots, which should be filled with light fresh Earth, and plunged into the Hot-bed again, where (if the Frames are deep enough to contain the Plants, without pressing of their Tops) they may remain all the Summer Season, observing to admit a large Share of fresh Air in warm Weather, as also to refresh them with Water as often as they shall require it. With this Management the Plants will sometimes produce their Flowers the same Season, but they seldom produce good Seeds in this Climate the first Year; so that at *Michaelmas*, you should remove some Plants of each Kind into the Bark-stove, where they should be often refreshed with Water during the Winter Season, but it should not be given to them in large Quantities. The Stove should be kept to temperate Heat, which will preserve these Plants through the Winter in good Health, and the following Summer they will produce Flowers and Seed in great Plenty.

BASELLA; Climbing Nightshade.

The Species omitted in the former Volume are;

2. *BASELLA flore albo, foliis & caulibus viridibus*. Climbing Nightshade from Malabar, with white Flowers, and pale green Stalks and Leaves.

3. *BASELLA Sinica, foliis & caulibus viridibus, minus succulentibus, fructu minori*. *Jess*. Climbing Indian Nightshade, with green Stalks and Leaves, which are less succulent, and a small Fruit.

The second Sort is exactly the same as the common Sort, excepting the Colour of the Leaves, Stalks, and Flowers; but I have observed it constantly retains the same Colour, so that I don't believe it to be an accidental Variety from Seeds; for from all the Seeds which I have sown I never found any one of the Plants which differed from the Parent

Plant. These two Plants seldom continue more than one or two Years, but as they produce Seeds in Plenty, so they may be easily propagated.

The third Sort is less common in *England* than either of the former. I received the Seeds of this Plant from Dr. *Jessieu* of *Paris*, from which I have obtained a Variety with variegated Stalks and Leaves. This Sort will not perfect its Seeds so soon as either of the former Sorts, so must be placed in the Stove, where it will continue through the Winter, and produce ripe Seeds the second Year. All these Sorts may be propagated by Cuttings, which should be laid to dry a Day or two after they are taken from the Plants, before they are planted, that the Wound may heal, otherwise they will rot. These Cuttings must be planted into Pots filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, where they will take Root in a Fortnight or three Weeks Time, when they should be treated in the same Manner as the seedling Plants.

All these Plants will climb to a considerable Height, and send forth a great Number of Branches, so that they should have a Place near the Back of the Stove, where they may be trained up to a Trellise, or fastened to the Back of the Stove, otherwise they will twist themselves about whatever Plants stand near them, which will make a very disagreeable Appearance in a Stove, and also be very injurious to the other Plants; whereas, when they are regularly trained to a Trellise, they will have a good Effect in adding to the Variety.

From the Berries of the two first Sorts I have seen a beautiful purple Colour drawn, but when used for painting, did not continue very long, but chang'd to a pale Colour; tho' I believe there might be a Method invented, whereby this beautiful Colour might be fixed, so as to become very useful; for I have been assured, that the Juice of these Berries has been used for staining of Callicoes in *India*.

BAUHINIA; Mountain-Ebony, *vulgo*.

This Plant was so named by Father *Plumier*, in Honour of the two famous Botanists *John* and *Caspar Baubin*.

The Characters are;

It hath a polypetalous anomalous Flower, consisting of five or more Leaves, which are disposed on one Side; from the Flower-cup arises the incurved Pointal, accompanied with several Stamina of the same Form, which afterward becomes a Pod inclosing kidney-shap'd Seeds.

The Species are;

1. *BAUHINIA non aculeata, folio ampliori & bicorni*. *Plum. N. Gen.* Mountain-Ebony, *vulgo*.

2. *BAUHINIA aculeata, folio rotundo emarginato*. *Plum. N. Gen.* The Indian Savin Tree.

3. *BAUHINIA aculeata, folio rotundo emarginato, flore magno albo*. *Houft.* Bauhinia with round Leaves, and large white Flowers.

4. *BAUHINIA flore luteo spicato, folio subrotundo bicorni*. *Houft.* Bauhinia with a yellow spiked Flower, and a round Leaf divided at the Top.

5. *BAUHINIA non aculeata, folio nervoso bicorni, floribus albicantibus*. *Houft.* Smooth Bauhinia,

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hinia, with a nervous Leaf divided at the Top, and white Flowers.

6. *BAUHINIA non aculeata, folio subrotundo majore, rigido & bicorni, flore purpurascete.* Houst. Smooth Bauhinia, with a large stiff Leaf divided at the Top, and a purplish Flower.

7. *BAUHINIA scandens & frutescens, folio subrotundo & bicorni, flore albo.* Shrubby climbing Bauhinia, with a round divided Leaf, and a white Flower.

The first Sort grows very plentifully on the Hills in every Part of the Island of *Jamaica*; it is also a Native of the *East-Indies*, and is well figured and described in the *Hortus Malabaricus*. It grows to the Height of sixteen or eighteen Feet, and produces Clusters of party-coloured Flowers at the Extremity of the Branches, which are succeeded by long flat Pods, in each of which are contained four or five Seeds. The Wood of this Tree being very hard, the Inhabitants of the *West-Indies* have given it the Name of *Mountain-Ebony*.

The second Sort grows plentifully in the low Lands of *Jamaica*, and in several other Parts of the *West* and *East-Indies*: this is also well figured and described in the *Hortus Malabaricus*. It grows to the Height of fifteen or sixteen Feet, and produces large Spikes of beautiful yellow Flowers at the End of the Branches. The whole Plant, if bruised, emits a strong Scent, somewhat like *Savin*, from whence the Inhabitants of the *West-Indies* have given it the Name of *Indian Savin Tree*.

The third Sort grows at *Cartbagen*, from whence I received Specimens of this Plant, collected by the late Dr. *William Houstoun*.

The fourth, fifth, sixth and seventh Sorts have been collected in the *Spanish West-Indies*, from whence I have receiv'd their Seeds, with fair Samples of the Plants dried; some of them were collected by the late Dr. *Houstoun*, and the others by Mr. *Robert Millar*, Surgeon.

These Plants are only propagated from Seeds, which may be easily procured from the *West-Indies*, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up two or three Inches high, they should be transplanted, each into a separate small Pot, filled with fresh light Earth, and plunged into a Hot-bed of *Tanners-bark*, observing to water and shade them until they have taken Root; after which they must have *Air* and *Water* in proportion to the Warmth of the Season, and the Bed in which they are placed. When the Plants have quite filled these Pots with their Roots, they should be removed out of these Pots, and after paring off the Roots on the Outside of the Ball of Earth, they must be put into Pots a Size larger than those, observing to fill the Pots with the same fresh Earth; and if the Plants are too high to stand under the Glasses of the common Hot-bed, they must be plunged into the *Bark-bed* in the Stove, being careful to water them so often as they shall require it, and to let them have *Air* in Summer, in proportion to the Heat of the Season; but in the Winter they must be kept pretty close; the first Sort will not require so great a Share of Heat as the second or third, both which are

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pretty tender Plants, and should be placed near the Fire, or in a Stove, amongst other of the most tender Plants. If these Rules be observed, and the Pots changed every Year, and new Earth applied to their Roots, they will make great Progress, and may be expected to flower in a few Years: but they must always be preserved in the *Bark-stove*.

BELLADONA; The Deadly Nightshade.

The Species omitted in the former Volume are;

2. *BELLADONA minoribus foliis & floribus.* Tourn. Deadly Nightshade with smaller Leaves and Flowers.

3. *BELLADONA frutescens rotundifolia Hispanica.* Tourn. Shrubby Spanish Deadly Nightshade with a round Leaf.

4. *BELLADONA Americana frutescens, flore albo, nicotianæ folio.* Plum. Cat. Shrubby American Deadly Nightshade with a white Flower and a Tobacco Leaf.

The second Sort is not so common in *England* as the first, but it is preserved in botanick Gardens for Variety.

These Plants are both easily cultivated, by sowing of their Seeds in the Spring on any Soil, or in any Situation; and when the Plants are come up, they may be transplanted into any abject Part of the Garden, where if they are suffered to remain and drop their Fruit, they will fill the Ground with young Plants, and the old Roots will continue several Years. I have frequently seen these Plants growing out of the Joints of Walls, where they have endured the severest Frost and the greatest Drought for several Years; they also grow equally well in low moist Soils, so that there is no Danger of their succeeding in any Place. The green Herb of these Plants is sometimes used in cooling Ointments, as a Substitute for the *Garden Nightshade*, which being an annual Plant, is not to be had so early in the Season, as the other Herbs used in these Ointments; when the *Belladonna* being in Perfection is by many used.

The shrubby *Spanish* Kind is preserved by the Curious in Botany for the sake of Variety, but there is very little Beauty in it. This will grow to the Height of eight or ten Feet, and have a strong woody Stem. It may be propagated by planting the Cuttings in the Spring upon a moderate Hot-bed, observing to water and shade them until they have taken Root, after which time they must be inured to the open Air by Degrees, and then they must be carefully potted, and placed in the Shade until they have taken new Root, when they may be set abroad with *Myrtles*, *Oleanders*, &c. and in Winter they must be removed into the Greenhouse, and placed amongst the hardier Kinds of Exoticks. This Plant produces Flowers every Year, but I have not observed any Fruit produced in *England*.

The fourth Sort was discovered by Father *Plumier* in the French Settlements in *America*; it hath also been found by Mr. *Robert Millar*, Surgeon, in the *Spanish West-Indies*; from whom I received the Seeds of this Plant. It is propagated by Seeds, which should be sown in

in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; when the Plants are come up an Inch high, they should be carefully transplanted, each into a separate small Pot, and plunged into the Hot-bed again, observing to water and shade them until they have taken Root; after which time, they should have fresh Air admitted to them every Day; by raising of the Glasses, and they must be constantly supplied with Water. During the Summer Season they may remain in these Hot-beds, but in Winter they must be removed into the Bark-stove, where if they are kept in a temperate Degree of Heat, they will thrive extremely well, and produce their Flowers.

BELLONIA.

This Plant was so named by Father Plumier, in Honour of the famous Petrus Bellonius, who has left many valuable Tracts on Natural History, &c.

The Characters are;

It hath a wheel-shaped Flower consisting of one Leaf, and divided at the Top into several Parts; from whose Cup arises the Pointal, fixed in the middle of the Flower like a Nail: The Flower-cup afterward becomes a hard oval pointed Fruit, in which is contained many small Seeds.

We have but one Species of this Plant, viz.

BELLONIA frutescens, folio melissæ aspero. Plum. Nov. Gen. Shrubby Bellonia, with a rough Balm Leaf.

This Plant is very common in several Parts of America, from whence I have received the Seeds; which were collected by the late Dr. William Houstoun.

It is propagated by Seeds, which should be sown early in the Spring, in a Pot filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water it frequently, as the Earth appears dry, but you must be careful not to wash the Seeds out of the Ground. When the Plants are come up half an Inch high, they should be carefully transplanted into Pots filled with light fresh Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken Root; after which Time they should have Air admitted to them every Day when the Weather is warm, and they must be frequently watered. When the Plants have filled these Pots with their Roots, they should be carefully shaken out of them, and their Roots trimmed, and then put into larger Pots filled with light fresh Earth, and then plunged into the Hot-bed again, observing to admit a larger Share of Air to them as the Weather becomes warmer, and as the Plants increase in Strength. In these Beds the Plants may remain during the Summer Season, provided the Glasses will admit of them to stand under them without pressing their Tops; at Michaelmas the Plants should be placed in the Stove, where they should be frequently watered during the Winter, but it should be given to them moderately at this Season: The Stove in which these Plants are placed, should be kept to temperate Heat, which is more agreeable to these Plants than a greater Warmth at that Season; the second

Year these Plants will sometimes flower, but they rarely produce good Seeds in this Climate; however, they may be propagated by Cuttings in the Summer Months, provided they are planted in light Earth on a moderate Hot-bed, and carefully watered and shaded until they have taken Root. These Plants must be constantly kept in the Stove, and should have a large Share of free Air in warm Weather, but if they are set abroad, they will not thrive in this Climate.

BERMUDIANA.

This Plant takes its Name from the Bermudas Islands, from whence the Seeds of the first Species were brought.

The Characters are;

It hath a Lily-flower, composed of six Petals, whose Empalement becomes a triangular Fruit, which opens in three Parts, and is divided into three Cells, which are filled with roundish Seeds.

The Species are;

1. *BERMUDIANA Iridis folio, fibrosa radice.* Tourn. Bermudiana with a Fleur-de-lys Leaf, and a fibrous Root.

2. *BERMUDIANA palmæ folio, radice bulbosa.* D. Lign. Tourn. Bermudiana with a Palm Leaf, and a bulbous Root.

The first Sort may be propagated by sowing of the Seeds in the Spring on a moderate Hot-bed, and when the Plants are come up, they should be transplanted into small Pots filled with light fresh Earth, and placed in a shady Situation until they have taken Root; after which Time they may be exposed to the open Air in Summer, but in Winter they must be sheltered from severe Frost, to which if they are exposed, it will destroy them. This Sort may also be propagated by parting of their Roots in the Spring, but they should not be divided into too small Parts, lest it prevent their Flowering. This Plant produces small blue Flowers in June and July, and in kindly Seasons will perfect their Seeds in this Country.

The second Sort never produces any Seeds in England, so can be only propagated by Offsets; this has a bulbous Root, about the Size of the Cornflag, but is not so flat; the Leaves of this Plant die off in Winter, and in the Spring there are new ones put forth. This Plant is much tenderer than the former, and requires a Stove to preserve it thro' the Winter; in Summer the Pots should be placed in a Bark-bed, otherwise the Plants will not produce Flowers in this Country; in Winter they should have very little Water given to them, for Wet will soon rot the Roots, when their Leaves are decayed. There is no great Beauty in either of these Plants, but they are preserved by the Curious for Variety-sake.

BERNARDIA.

This was so named by the late Dr. William Houstoun, in Honour of Dr. Bernard de Jussieu, Demonstrator of Plants in the Royal Garden at Paris.

The Characters are;

It is Male and Female in different Plants; the Male-Plants produce small Katkins, which, when

when ripe, fall off; the Female-Plants have apetalous Flowers, which are succeeded by Tricocco Fruits, resembling those of the Ricinus.

The Species are;

1. BERNARDIA *frutescens erecta, carpinifolia*, mas. Houst. Male upright shrubby Bernardia with an Hornbeam Leaf.

2. BERNARDIA *frutescens erecta, carpinifolia*, femina. Houst. Female upright shrubby Bernardia with an Hornbeam Leaf.

3. BERNARDIA *fruticosa maritima repens, foliis subrotundis & subtus argenteis*, mas. Houst. Male creeping shrubby Bernardia, with roundish Leaves, which are of a Silver Colour underneath.

4. BERNARDIA *fruticosa maritima repens, foliis subrotundis & subtus argenteis*, femina. Houst. Female creeping shrubby Bernardia, with roundish Leaves, which are of a Silver Colour underneath.

The two first Sorts were found by Doctor Houstoun in Jamaica, where they are in great Plenty near the Sea, and generally grow near each other; so that where-ever a Female Tree is found, there is rarely a Male wanting near it. These usually grow to the Height of eight or ten Feet, and divide into many Branches; the Flowers are produced at the Joints, near the Footstalks of the Leaves.

The other two Sorts were found by Doctor Houstoun at La Vera Cruz, where they grow on the Shore upon the Sand-banks; these seldom rise above a Foot high, having many trailing Branches, which send forth Roots from their Joints, whereby they propagate themselves.

These Plants may be obtained from Seeds, which should be brought over soon after they are ripe, and sown in Pots filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing frequently to water them; when the Plants are come up, they should be carefully transplanted into separate Pots filled with light fresh Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken Root, after which Time they should have Air and Water in proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed: in Summer they should have a large Share of fresh Air in warm Weather, and should be frequently watered; but in Winter they must be placed in a Stove, where they should be kept in a moderate Heat, and must be frequently watered, but it should not be given to them in large Quantities at that Season. With this Management these Plants will thrive extremely well, and will produce their Flowers in this Climate, but they will rarely perfect their Seeds in this Country: These Plants may be propagated by Cuttings, or laying down their tender Branches in the Spring; which, if duly watered, will take Root in three Months, when they may be cut off from the old Plants, and treated as those raised from Seeds.

BESLERIA.

This Plant was named after Basilius Besler, an Apothecary at Nuremberg, who was the Author of a Book intituled *Hortus Eystetensis*.

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The Characters are;

It hath a Flower consisting of one Leaf, which is tubulous, and of an anomalous or personated Figure, having two Lips; from whose Cup arises the Pointal, which is fixed like a Nail in the binder Part of the Flower, which afterward becomes a soft fleshy oval-shaped Fruit, in which are many small Seeds.

The Species are;

1. BESLERIA *melissæ Tragi facie*. Plum. Nov. Gen. Besleria with the Face of Tragus's Balm.

2. BESLERIA *virgæ aureæ foliis, flore luteo minor*. Plum. Nov. Gen. Besleria with Goldenrod Leaves, and a small yellow Flower.

3. BESLERIA *virgæ aureæ foliis, flore luteo, major*. Plum. Nov. Gen. Besleria with Goldenrod Leaves, and a large yellow Flower.

4. BESLERIA *scandens cristata fructu nigro*. Plum. Nov. Gen. Climbing Besleria with a black Fruit.

These four Plants are common in the warm Parts of America, from whence the Seeds have been brought into Europe, and have been cultivated in some curious botanick Gardens. These Seeds should be sown on a Hot-bed early in the Spring, and when the Plants are come up half an Inch high, they should be each transplanted into a small Pot filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which Time they should have Air and Water in proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed. When the Plants have filled these small Pots with their Roots, they should be shaken out of them, and their Roots trimmed, and then put into larger Pots filled with light fresh Earth, and plunged into the Hot-bed again; where they should have a large Share of fresh Air in warm Weather, and must be frequently watered; with this Management these Plants will thrive very well in Summer, but in Winter they must be removed into the Stove, where they must be placed in a temperate Warmth, and should be often watered: the second Year these Plants will flower, and sometimes they will perfect their Seeds in this Country; but they must be constantly preserved in the Stove, for they will not live in the open Air.

BETONICA; Betony.

The Species omitted in the former Volume are;

2. BETONICA *alba*. C. B. P. Betony with a white Flower.

3. BETONICA *major Danica*. Park. Theat. Greater Danish Betony.

4. BETONICA *minima Alpina Helvetica*. Park. Theat. The least Betony of the Helvetian Alps.

5. BETONICA *Alpina incana purpurea*. Borell. Icon. Hoary Alpine Betony with purple Flowers.

6. BETONICA *orientalis folio angustissimo & longissimo, spica florum crassiore*. Tourn. Cor. Eastern Betony with a long narrow Leaf, and a thick Spike of Flowers.

7. *BETONICA rubicundissimo flore, Montis Aurei*. H.R. P. Betony, with a very red Flower of Mount d'Or in Auvergne.

8. *BETONICA orientalis latifolia, caule brevi, flore maximo*. Tourn. Cor. Broad leav'd Eastern Betony, with a short Stalk, and a very large Flower.

9. *BETONICA arvensis annua, flore ex albo flavescente*. Tourn. Annual Field Betony, with a yellowish white Flower.

10. *BETONICA Alpina latifolia major villosa, flore luteo*. H. R. Par. Great broad-leav'd hairy Betony of the Alps, with a yellow Flower.

These Plants are all of them hardy, and may be propagated by sowing of their Seeds in the Spring, on a Bed of fresh Earth; and when the Plants are come up strong enough to transplant, they should be planted on a shady Border, where they will thrive, and the second Year will produce Flowers, and perfect their Seeds. The ninth Sort is an annual Plant, which should be sown soon after the Seeds are ripe; for if they are sown in the Spring, the Seeds do not come up so well, nor will the Plants produce good Seeds; so that, if the Seeds are permitted to shed, the Plants will come up and thrive without any farther Culture.

All these Sorts are preserved by the Curious in Botany for Variety, but there are none of them used except the first Sort, which grows wild in Woods, and other shady Places, in divers Parts of England. This is greatly esteemed as a vulnerary Herb; Antonius Musa Physician to the Emperor Augustus wrote a whole Book concerning the Virtues of this Plant, from whence it came to be so much in Esteem, that they have a Proverb in Italy to this Purpose; *Vende la Tonica, e compra la Betonica*. i. e. Sell your Coat, and buy Betony; and when they would praise any Person very much, they say, he has more Virtue than Betony.

BIDENS; Water Hemp-Agrimony.

The Characters are;

It hath a compound Flower, for the most part flosculous, consisting of many Florets, divided into several Segments, sitting on the Embryo, and contained in the Flower-cup; sometimes there are also found Semi-florets: The Embryo afterward becomes a Seed, ending in Prickles.

The Species are;

1. *BIDENS foliis tripartito divisis*. Cæsalp. Water Hemp-Agrimony with a divided Leaf.

2. *BIDENS folio non dissecto*. Cæsalp. Water Hemp-Agrimony with an undivided Leaf.

3. *BIDENS Canadensis latifolia, flore luteo*. Tourn. Broad-leav'd Hemp-Agrimony of Canada, with a yellow Flower.

4. *BIDENS Americana, apii folio*. Tourn. American Hemp-Agrimony, with a Smallage Leaf.

5. *BIDENS Indica, hieracii folio, caule alato*. Tourn. Indian Hemp-Agrimony, with an Hawk-weed Leaf, and winged Stalk.

6. *BIDENS trifolia Americana, leucanthemi flore*. Tourn. Three-leav'd American Hemp-Agrimony, with a greater Daisy Flower.

7. *BIDENS Americana ramosissima, foliis gramineis, flore parvo luteo*. Hieracium fruticosum, angustissimis gramineis foliis, capitulis parvis.

Sloan. Cat. American branchy Hemp-Agrimony, with grassy Leaves, and small yellow Flowers.

The two first Sorts grow wild in moist Places, and by the Sides of Ditches and standing Waters, in most Parts of England, so are rarely permitted to have a Place in Gardens.

The third and fourth Sorts are Natives of the northern Parts of America, where they are the most common Weeds. These must be raised on a Hot-bed in the Spring, in order to bring the Plants forward, otherwise they will not perfect their Seeds in this Country.

The fifth, sixth and seventh Sorts were brought from the warmer Parts of America, so require a greater Share of Heat to bring them to flower and seed in England. They are all annual Plants, so must be raised every Spring on a Hot-bed, and afterwards planted into Pots, and the two last should be placed in a Bark-bed, to bring them to flower; but the other three Sorts may be placed in the open Air, when the Plants have obtain'd sufficient Strength, but must be frequently watered in dry Weather. There is no great Beauty in these Plants, but they are preserved in many curious Gardens for Variety.

BIGNONIA; Trumpet Flower.

The Species omitted in the former Volume are;

5. *BIGNONIA Americana arborescens pentaphylla, flore roseo, major, siliquis planis*. Plum. White Wood, or Tulip Flower, vulgo.

6. *BIGNONIA scandens tetraphylla, fructu maximo echinato*. Houst. Climbing four-leav'd Bignonia, with a large echinated Pod.

7. *BIGNONIA scandens tetraphylla, flore racemoso carneo*. Houst. Climbing four-leav'd Bignonia, with flesh-colour'd Flowers growing in long Bunches.

8. *BIGNONIA Americana, foliis subrotundis glabris, fructu compresso orbiculato*. Trumpet Flower with smooth roundish Leaves, and round compressed Fruit.

9. *BIGNONIA Americana scandens, foliis pinnatis hirsutis, & marginibus sinuatis, siliquis longissimis & angustissimis*. Climbing American Trumpet Flower, with winged hairy Leaves indented on their Edges, and long narrow Pods.

10. *BIGNONIA Americana scandens, triphylla & pentaphylla, lobis amplioribus mucronatis & serratis, siliquis longis compressis marginatis*. Climbing Trumpet Flower, with three and five Leaves, which are large, pointed, and sawed on their Edges, and long flat Pods which are bordered.

11. *BIGNONIA Caroliniana scandens, & semper-virens, foliis angustis glabris, floribus luteis odoratis, siliquis brevissimis*. Climbing Carolina Trumpet Flower, with narrow smooth Leaves, sweet yellow Flowers, and short Pods, commonly called yellow Jasmine in America.

The fifth Sort grows upright to a considerable Size in the West-Indies, but in England it only makes a large Shrub, and produces Flowers annually in great Plenty. This Plant makes a beautiful Appearance in the Stove, the Leaves being large, of a thick Substance, and a shining

ing green Colour ; the Flowers are large, and have a sweet Scent, but are of a short Duration. The Cuttings of this Plant will take Root, if they are taken off toward the latter End of *March*, before the Plants begin to shoot, and laid in the Stove two or three Days to heal the wounded Part before they are planted ; for there is a large Quantity of a milky Juice in this Plant, which will occasion the rotting of the Cuttings, if they are planted too green. These Cuttings must be planted in Pots filled with fresh Earth, and plunged into a Hot-bed of Tanners-bark ; observing to shade them in the Heat of the Day, and to refresh them with Water ; but it must not be given in too large Quantities, lest it rot the Cuttings. It may also be propagated from Seeds, which may be obtain'd from *Jamaica* or *Barbados* ; but it should be brought over in the Pods, otherwise it will not keep, and should be sown as soon as possible, in Pots filled with fresh light Earth, and plunged into a moderate Hot-bed. When the Plants come up, they must be each transplanted into a separate Pot filled with the same Sort of Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken Root ; after which they must be treated in the manner directed for the *Coffee-tree*, and other tender Plants, which are preserved in the Bark-stove.

The sixth and seventh Sorts are trailing Plants of lower Growth : These were sent from *Carthage* by the late Dr. *Houftoun*. These may be propagated from Seeds, or by laying down of the Branches, which will take Root in three or four Months. These should be treated in the same manner as the former Sort, and must be kept in the Bark-stove ; but they do not require so much Heat in Winter, and in Summer should have more Air ; otherwise they will draw up weak. These have not produced Flowers in *England* as yet ; though, from the Appearance of the Plants, we may expect them to flower very soon.

The eighth, ninth and tenth Sorts were discovered by Mr. *Robert Millar*, Surgeon, at *Campechy*, from whence he sent their Seeds, which have succeeded in the Physick-Garden at *Chelsea*, where these Plants are now growing.

All these Sorts may be propagated by Seeds, which should be sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark. These Pots should be frequently watered to keep the Earth moist, otherwise the Seeds will dry up, which will prevent their growing ; when the Plants are come up, they should be each transplanted into a separate small Pot filled with light fresh Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken fresh Root ; after which Time they should have Air and Water in proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed. As these Plants advance in Strength, so they should be shifted into larger Pots ; and when they are grown too tall to stand under the Glasses of the Hot-bed, they should be removed into the Bark-stove,

where they should be kept in a moderate Heat, and must be frequently refreshed with Water : with this Management the Plants will thrive extremely well, and in two Years many of them will produce their Flowers, but they rarely perfect their Seeds in this Country.

The eleventh Sort is very common in *South-Carolina*, where it climbs on the Hedges, or whatever Plants grow near it ; and in Summer produces fine Bunches of yellow Flowers, which have a most agreeable Scent. This may be propagated by Seeds as the former Sorts, and will thrive in a less Degree of Heat than either of them.

BIHAI.

This is the *American* Name of the Plant.

The Characters are ;

It hath a tubulous Flower consisting of one Leaf, shaped almost like a Lily, and cut into two Parts ; the Pointal and Stamina are included in two Leaves. The Pointal afterwards becomes a fleshy three-cornered Fruit, containing three hard rough Seeds. To these Notes should be added, many Flowers contained in a common Covering.

The Species are ;

1. *BIHAI amplissimis foliis, florum vasculis coccineis. Plum. Nov. Gen.* Bihai with large Leaves, and a scarlet Covering to the Flowers.

2. *BIHAI amplissimis foliis, florum vasculis subnigris. Plum. Nov. Gen.* Bihai with large Leaves, and black Covering to the Flowers.

These Plants are at present very rare in *Europe*. I received Seeds of the first Sort from *Panama*, which came up in the Physick-Garden at *Chelsea* ; but the Plants have not produced any Flowers as yet.

They may be propagated by Seeds, which should be sown on a Hot-bed early in the Spring ; and when the Plants are come up, they should be each transplanted into a separate Pot filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root ; after which time in warm Weather they should have a large Share of fresh Air, and must be frequently watered. During the Summer Season the Plants may remain in the Hot-bed ; but in Winter they must be removed into the Stove, and placed near the Fire-place, that they may have a great Share of Heat, without which they will not live through the Winter in this Climate ; they must also be frequently watered, but it should not be given to them in too great Plenty in the Winter Season, though in the Summer they will require a large Share of Moisture : with this Management these Plants will produce their Flowers very well in this Climate.

BOCCONIA.

This Plant was so called after the Reverend *Paul Boccone* of *Sicily*, who has published some curious Books of Botany.

The Characters are ;

It hath a Flower consisting of one Leaf ; from the Middle arises the Pointal, which afterward becomes an oval-shaped pointed Fruit, which is full of Juice, each containing one round Seed.

We

We have but one *Species* of this Plant, viz.

Bocconia racemosa, *sphondylii folio tomentoso*. Plum. Nov. Gen. Branching Bocconia, with a woolly Cow Parsnip Leaf.

This Plant is called by Sir Hans Sloane in his Natural History of *Jamaica*, *Cbelidonium majus arboreum*, *foliis quercinis*; or greater Tree Celandine with Oak Leaves.

It is very common in *Jamaica*, and several other Parts of *America*; where it grows to the Height of ten or twelve Feet, having a strait Trunk, as large as a Man's Arm, which is covered with a white smooth Bark. At the Top it divides into several Branches, on which the Leaves are placed alternately. These Leaves are eight or nine Inches long, and five or six broad, are deeply sinuated sometimes almost to the Mid-rib, and are of a fine glaucous Colour; so that this Plant makes a beautiful Variety among other exotick Plants in the Stove. The whole Plant abounds with a yellow Juice like the greater Celandine, and is of an acrid Nature, so that it is used by the Inhabitants of *America*, to take off Warts, and Spots from the Eyes.

It is propagated by Seeds, which should be sown in a Pot filled with light fresh Earth, early in the Spring, and plunged into a Hot-bed of Tanners-bark, observing to water it frequently, otherwise the Seeds will not grow; when the Plants are come up, they should be each transplanted into a separate small Pot, filled with light sandy Earth, and plunged into the Hot-bed again, observing to shade the Glasses in the Heat of the Day, until the Plants have taken Root; you must also refresh them gently with Water, but it should be done frequently, and given to them sparingly while they are young; for their Stems being very tender, and full of Juice, will rot, if they receive too much Moisture; but after their Stems are become woody, they will require a plentiful Share of Water, especially in hot Weather, when also they should have a large Share of Air, by raising the Glasses of the Hot-bed. The Plants, in two Months after transplanting, will have filled these small Pots with their Roots; therefore they should be shaken out of them, and planted into larger Pots filled with light fresh Earth, and should be plunged into the Bark-stove, where they should have a large Share of fresh Air in warm Weather, and must be plentifully watered. With this Management I have raised these Plants upward of two Feet high in one Season, which were also very strong in their Stems. These Plants must be constantly kept in Stoves, allowing them a temperate Heat in Winter; and in Summer they should have a large Share of Air in warm Weather, as also a large Share of Moisture. I have not heard that this Plant has flowered yet in *Europe*, though I doubt not, but in two or three Years, there are some Plants in the Physick-Garden at *Chelse*a which will flower; but if it were not to flower, the singular Beauty of the Plant renders it worthy of a Place in every curious Collection of Plants; and it seems the *Indians* were very

fond of it, for *Hernandez* tells us, the *Indian Kings* did plant it in their Gardens.

BONDUC; The Nickar-tree, *vulgo*.

The Characters are;

It hath a polypetalous or a monopetalous Flower, cut very deeply into several Segments, but is almost of an anomalous Figure: from whose Calyx arises the Pointal, which afterward becomes a Pod beset all over with Prickles, in which are contained one or two round hard Seeds.

The Species are;

1. *BONDUC vulgare majus polyphyllum*. Plum. Nov. Gen. The yellow Nickar, or Horse-nickar, *vulgo*.

2. *BONDUC vulgare minus polyphyllum*. Plum. Nov. Gen. The grey or Ash-coloured Nickar.

These two Plants are very common in *Jamaica*, *Barbados*, and the *Caribbe Islands*, where the Children use the Fruit for Marbles, their outer Coats being so hard, as with great Difficulty to be broken. These Fruit are often brought to *England*, and formerly were used for Buttons, but at present I don't know any Use there is made of them. They commonly grow to the Height of ten or twelve Feet, and twist themselves round any other Trees which grow near them; there is very little Difference between these two Plants, except in the Colour of their Fruit, and that the second Sort has smaller and rounder Leaves than the first.

These Plants are both propagated by Seeds, which are so hard as not easily to be made to vegetate in *England*. The only way by which I have been able to get these Plants from Seeds, is, to put the Seeds into a warm Bed of Tanners-bark, under a Pot, where the Heat of the Tan, and the Moisture which gets thro' the Pot, will cause the Shell of the Fruit to burst, and the young Plant soon after appears; then they may be taken out of the Tan, and put each into a small Pot filled with fresh Earth, and plunged into the Tan again. These Plants will make considerable Progress, if they are kept in a warm Bed, and frequently watered. They must also be kept in a Bark-stove in Winter, otherwise it will be difficult to preserve them in this Country. Their Stems, Branches and Leaves, are all beset with sharp crooked Spines, which fasten themselves to the Cloaths of any Person who approaches them. These Plants are preserved for Variety by such as are curious in exotick Plants.

BONTIA; *Barbados Wild Olive*, *vulgo*.

The Characters are;

It hath a personated Flower consisting of one Leaf, whose upper Lip is erect, the under Lip is divided into three Parts: From out of the Cup arises the Pointal, fixed like a Nail in the hinder Part of the Flower; which afterward becomes an oval Fruit, which is soft and full of Juice, in which is contained one oblong Shell, inclosing a Nut of the same Form.

We know but one *Species* of this Plant at present; which is,

BONTIA laureola facie. Hort. Elth. The *Barbados Wild Olive*. This

This Plant is greatly cultivated in the Gardens at *Barbados* for making of Hedges; than which there is not a more proper Plant which will thrive in those hot Countries, it being an Ever-green, and of quick Growth. I have been informed, that from Cuttings (planted in the rainy Season, when they have immediately taken Root) there has been a complete Hedge four or five Feet high in eighteen Months. And as this Plant will bear cutting very well, so it is formed into a very close thick Hedge, which makes a beautiful Appearance. In *England* it is preserved in Stoves, with several curious Plants of the same Country. It may be raised from Seeds, which should be sown on a Hot-bed early in the Spring (that the Plants may acquire Strength before Winter). When the Plants are come up, they must be transplanted out each into a separate Half-penny Pot, filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which, they must have a large Share of Air in warm Weather, and be often refreshed with Water. In Winter they must be placed in the Stove, where they should have a moderate Degree of Warmth, and will often require Water; but it must not be given to them in too great Quantities, lest it rot their tender Roots. In Summer they must have a great Share of Air, but will not do well if exposed abroad: So that they should always remain in the Stove, among Plants which require a great Share of Air, which may be admitted by opening the Glasses in very hot Weather. With this Management, these Plants will produce Flowers and Fruit in two or three Years from Seed. They may also be propagated by Cuttings, which should be planted in the Spring, before the Plants have begun to shoot: These must be put into Pots filled with light rich Earth, and plunged into a moderate Hot-bed, observing to water and shade them until they have taken Root; after which they must be treated as hath been directed for the seedling Plants. These Plants being ever-green, and growing in a pyramidal Form, make a pretty Variety in the Stove, amongst other exotick Plants.

BRASSICA; Cabbage.

The *Species* omitted in the former Volume are;

1. *BRASSICA gongylodes*. C. B. P. The Turnep Cabbage.
2. *BRASSICA asparagodes crispa*. C. B. P. Curled Colewort.
3. *BRASSICA peregrina moschum olens*. H. R. Par. The Musk Cabbage.
4. *BRASSICA maritima arborea, seu procerior ramosa*. Mor. Hist. Branching Tree Cabbage from the Sea-coast.
5. *BRASSICA rugosa, longioribus foliis*. J. B. Brown Broccoli.
6. *BRASSICA arvensis*. C. B. P. Common Colewort.
7. *BRASSICA Alpina perennis*. Tourn. Perennial Alpine Colewort.

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8. *BRASSICA campestris perfoliata, flore albo*. C. B. P. Perfoliated wild Cabbage, with a white Flower.

9. *BRASSICA campestris perfoliata, flore purpureo*. C. B. P. Perfoliated wild Cabbage, with a purple Flower.

The Turnep Cabbage was formerly more cultivated in *England* than at present; for since other Sorts have been introduced which are much better flavoured, this Sort has been neglected. There are some Persons who esteem this Kind for Soups, but it is generally too strong for most *English* Palates, and is seldom good but in hard Winters, which will render it tender, and less strong.

It may be propagated by sowing the Seeds in *March*, on a Bed of light fresh Earth and when the Plants are come up about an Inch high, they should be transplanted out into a shady Border, at about two Inches distance every way, observing to water them until they have taken Root; after which time they will require no other Culture, but to keep them clear from Weeds, unless the Season should prove extremely dry; in which case it will be proper to water them every four or five Days to prevent their being stunted by the Mildew, which is subject to seize these Plants in very dry Weather.

The latter End of *May*, or the Beginning of *June*, these Plants should be transplanted out where they are to remain, allowing them two Feet distance every way, observing to water them until they have taken Root; after which time they will require no other Culture but to keep them clear from Weeds; and as their Stems advance, so the Earth should be drawn up to them with a Hough, which will preserve the Earth moist about their Roots, and prevent their Stems from drying, and growing woody, so that the Plants will grow more freely. In Winter they will be fit for Use, when they should be cut off, and the Stems pulled out of the Ground, and thrown away, as being good for nothing after the Heads are cut off.

The curled Colewort is more generally esteemed than the former. This may be propagated by sowing of the Seeds the Beginning of *July*, and when the Plants are strong enough for transplanting, they should be planted in Rows about eight or nine Inches asunder, and four or five Inches distance in the Rows; this Work should be performed at a moist time, when the Plants will soon take Root, and require no farther Care. These will be fit for Use after *Christmas*, and continue good until *April*, so that they are very useful in a Family.

The Musk Cabbage has thro' Negligence been almost lost in *England*, tho' for eating it is one of the best Kinds we have, but is tenderer than many other Sorts, so not profitable for Gardeners who supply the Markets; but those who cultivate them for their own Table, should make Choice of this, rather than any of the common Cabbage; for it is always looser, and the Leaves more crisp and tender, and has a most agreeable musky Scent when cut. This may be propagated in the same manner as the

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common

common Cabbage, and should be allowed the same Distance. It will be fit for Use in *October*, *November*, and *December*; but if the Winter proves hard, these will be destroyed much sooner than the common Sort.

The branching Sea-Cabbage is found wild in several Parts of *England*, on the Sea-coast, and is sometimes gathered by the poor Inhabitants in the Spring, and eaten; but it is apt to be strong and bitter, so that it is rarely cultivated for Use in the Gardens.

The brown Broccoli is by many Persons greatly esteemed, tho' it doth not deserve a Place in the Kitchen-Garden, where the *Roman* Broccoli can be obtained, which is much sweeter, and will continue longer in Season. Indeed the brown Sort is much hardier, so that it will thrive in the coldest Situations, where the *Roman* Broccoli is sometimes destroyed in very hard Winters. The brown Sort should be sown in *April*, and managed as hath been directed for the common Cabbage, and should be planted at the same Distance (which is about two Feet and an half asunder). This will grow very tall, so should have the Earth drawn up to their Stems as they advance in Height. This doth not form Heads so perfect as the *Roman* Broccoli, so the Stems and Hearts of the Plants are the Part which is eaten.

The *Roman* Broccoli (if well managed) will have large Heads, which appear in the Centre of the Plants, like Clusters of Buds. These Heads should be cut before they run up to Seed, with about four or five Inches of the Stems; the skin of these Stems should be stripp'd off, before they are boiled. These will be very tender, and little inferior to *Asparagus*. After the first Heads are cut off, there will be a great Number of Side-shoots produced from the Stems, which will have small Heads to them, but are full as well flavoured as the large Heads. These Shoots will continue good until the Middle of *April*, when the *Asparagus* will come in Plenty to supply the Table.

Besides this first Crop of Broccoli (which is usually sown the Middle or latter End of *May*) it will be proper to sow another Crop the Beginning of *July*, which come in to supply the Table the latter End of *March*, and the Beginning of *April*; and being very young, will be extremely tender and sweet.

In order to save good Seeds of this Kind of Broccoli in *England*, you should reserve a few of the largest Heads of the first Crop, which should be let remain to run up to Seed, and all the Under-shoots should be constantly stripp'd off, leaving only the main Stem to flower and seed. If this be duly observed, and no other Sort of Cabbage permitted to seed near them, the Seeds will be as good as those procured from abroad, and the Sort may be preserved in Perfection for many Years.

The common Colewort is now almost lost near *London*, where their Markets are usually supplied with Cabbage or Savoy Plants, instead of them, and those being tenderer and more delicate are better worth cultivating than the common Colewort, which is stronger, and better able to resist the Cold in severe Winters

than either of those, but is not near so delicate. And since the Winters in *England* have been generally temperate of late Years, so the common Cabbage and Savoy Plants have constantly been cultivated by the Gardeners near *London*, and sold in the Markets as Coleworts. Indeed where Farmers sow Coleworts to feed their Milch Cattle in the Spring, when there is a Scarcity of Herbage, the common Colewort is to be preferred, as being so very hardy, that no Frost will destroy it. The best Method to cultivate this Plant in the Fields, is, to sow the Seeds about the Beginning of *July*, chusing a moist Season, which will bring up the Plants in about ten Days or a Fortnight; the Quantity of Seed for an Acre of Land is nine Pounds; when the Plants have gotten five or six Leaves, they should be houghed, as is practised for Turneps, cutting down all the Weeds from amongst the Plants, and also thinning the Plants where they are too thick; but they should be left thicker than Turneps, because they are more in danger of being destroyed by the Fly; this Work should be performed in dry Weather, that the Weeds may be killed; for if it should prove moist soon after, the Weeds will take Root again, and render the Work of little Use. About six Weeks after, the Plants should have a second houghing, which if carefully performed in dry Weather, will intirely destroy the Weeds, and make the Ground clean, so that they will require no farther Culture: in the Spring they may either be drawn up and carried out to feed the Cattle, or they may be turned in to feed them as they stand; but the former Method is to be preferred, because there will be little Waste, whereas when the Cattle are turned in amongst the Plants, they will tread down and destroy more than they eat.

The perennial *Alpine* Colewort is also little cultivated in the Gardens near *London* at present. This is very hardy, and may be cultivated in the same Manner as the former Sort. This will continue two Years before it runs up to Seed, and will afterwards produce many Side-shoots, and in poor Land will continue three or four Years; but in rich Soils it will not last so long. This may be used as the former Sort to feed Cattle, for it is not so good for the Table as the Plants which are now cultivated for that Purpose.

The other two Sorts of wild Cabbage are Varieties fit for a botanick Garden; but are Plants of no Use. These may be propagated by sowing of their Seeds on a Bed of light Earth early in the Spring, in the Place where they are designed to remain (for they do not bear transplanting well): when the Plants are come up pretty strong, they should be thinn'd, so as to leave them four or five Inches apart, and they must be constantly kept clear from Weeds. In *June* they will flower; and their Seeds will ripen the Beginning of *August*, which if permitted to fall, the Plants will come up, and maintain themselves without any farther Care but to keep 'em clear from Weeds. They are annual Plants, and perish when they have perfected their Seeds.

BREYNIA.

This Plant was so named by Father Plumier, in Honour to Doctor Breynius, a learned Botanist at Dantzick, who published two *Prodromus's* to his History of Plants, and one Century in Folio, in which the Plants are curiously delineated and engraven.

The Characters are ;

It hath a Rose-flower, consisting of many Petals, which are placed in a circular Order, from whose Flower-cup rises the Pointal; which afterwards becomes a Fruit or Pod, which is soft and fleshy, in which are several Kidney-shap'd fleshy Seeds.

The Species are ;

1. BREYNIA *amygdali foliis latioribus*. Plum. Nov. Gen. Breynia, with broad Almond Leaves.

2. BREYNIA *elæagni foliis*. Plum. Nov. Gen. Breynia, with Leaves like those of the wild Olive.

Both these Plants are very common in Jamaica, and several other Parts of America, where they usually grow to the Height of thirty Feet ; their Trunks are about the Thickness of a Man's Thigh, which are covered with a smooth Ash-coloured Bark. The Branches come out on every Side, so as to form a regular Head, and being beset with hoary Leaves, make an agreeable Appearance.

These Plants are both very impatient of Cold, so must be preserved in Stoves, otherwise they will not live thro' the Winter in this Climate. They may be propagated by Seeds, which may be obtained from America. These Seeds should be sown on a Hot-bed early in the Spring, and when the Plants are come up two Inches high, they should be carefully transplanted each into a separate small Pot, filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root ; after which time the Glasses of the Hot-bed should be raised every Day in warm Weather, to admit fresh Air to the Plants, as also to let the Steam of the Bed pass off ; they must also be frequently watered during the Summer Season, and when the Plants have grown so much as to fill the Pots with their Roots, they should be carefully shaken out of them, and the Fibres round the Outside of the Ball of Earth should be carefully pared off, and then put into Pots a Size larger than those they were in before, which should be filled with light rich Earth, and then plunged into the Hot-bed again, observing to water them frequently in hot Weather, as also to admit fresh Air to them every Day. In this Bed they may remain until the End of September, when they must be placed in the Bark-stove, where during the Winter Season they should be kept in a temperate Heat, and must be often refreshed with Water, but it must not be given to them in large Quantities at this Season.

As these Plants increase in Bulk, so they should be placed in larger Pots ; but you must be very careful not to over-pot them, which will cause the Plants to decline, and if not timely remedied, will destroy them. In Sum-

mer these Plants should have a large Share of fresh Air in warm Weather, but they must not be placed in the open Air ; for if they are not constantly preserved from the Cold, it will destroy them in a short time. If these Directions are duly observed, the Plants will make great Progress, and in a few Years will produce Flowers.

BRUNSFELSIA. This Plant takes its Name from Dr. Brunsfelsius, a famous Physician.

The Characters are ;

The Flower consists of one Leaf shaped like a Funnel, which is tubulous, and cut into many Parts at the Top ; from whose Calyx arises the Pointal, which afterwards becomes a round, soft, fleshy Fruit, containing roundish Seeds between the Rind and the Flesh.

We have but one Species of this Plant ; which is,

BRUNSFELSIA *flore albo, fructu croceo molli*. Plum. N. G. Brunsfelsia with a white Flower, and a soft Saffron-coloured Fruit.

This Plant is very common in Barbados and Jamaica, but in Europe it is at present very rare : It may be propagated from Seeds, which should be sown early in the Spring, in Pots filled with light Earth, and plunged into a Hot-bed of Tanners-bark ; observing to water the Earth as often as you find it necessary. When the Plants are come up, they should be transplanted each into a separate small Pot, filled with fresh light Earth, and plunged into the Hot-bed again ; observing to water and shade the Plants until they have taken Root ; after which, they should have Air let into the Hot-bed, in proportion to the Warmth of the Season, and the Bed into which they are placed ; and they must be frequently refreshed with Water. When the Plants have advanced so high as not to be contained in the Frames, they should be removed into the Bark-stove ; where, during the Summer Months, they should have a large Share of free Air ; but in Winter they must be kept very close. With this Management the Plants will be very strong, and produce their Flowers every Season. These Plants may also be increased by planting their Cuttings in the Spring before they put out, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root ; after which they must be managed as hath been directed for the seedling Plants.

BRYONIA ; Briony.

The Species omitted in the former Volume are ;

2. BRYONIA *Africana glabra, foliis in profundas lacinias divisis, flore luteo*. Olden. Smooth African Briony, with deep cut Leaves, and yellow Flowers.

3. BRYONIA *Americana, olivæ fructu rubro*. Plum. Cat. American Briony, with a red Olive-shap'd Fruit.

4. BRYONIA *Africana, fructu variegato*. Hort. Eltb. African Briony, with a variegated Fruit.

5. BRYONIA *Africana laciniata, tuberosa radice, floribus herbaceis*. Par. Bat. African cut-leav'd

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leav'd Briony, with a tuberosé Root, and herbaceous Flowers.

The second and fifth Sorts are perennial Plants, their Roots remaining several Years, but their Branches decay every Winter. These Roots must be planted in Pots filled with fresh light Earth, and in Winter must be placed in the Green-house, to protect them from Frost, and great Rains, which would destroy them, if they were exposed thereto. During the Winter Season they should have very little Water given to them, but in Summer, when they are exposed to the open Air, they must be frequently refreshed with Water in dry Weather. These Plants will flower in July, and in warm Summers will perfect their Seeds.

The third and fourth Sorts are annual Plants. These must be raised in a Hot-bed early in the Spring, and when the Plants are about three Inches high, they should be each transplanted into a small Pot filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root, after which time they should have Air let into the Bed every Day, in Proportion to the Warmth of the Season. When the Plants are grown so large, as to ramble about on the Surface of the Bed, and begin to entangle with other Plants, they should be shifted into larger Pots, and placed in the Bark-stove, where their Branches may be trailed to the Wall, or against an Espalier, that they may have Sun and Air, which is absolutely necessary for their producing Fruit. When these Plants are full of Fruit, they make a very pretty Variety in the Stove, amongst other exotick Plants.

The second and fifth Sorts are also propagated from Seeds, which should be sown on a Hot-bed; and when the Plants are fit to transplant, they should be put into Pots; and after they have taken Root, should be inured to bear the open Air by Degrees.

The Briony being Male and Female in different Plants, induced me to make some Experiments with it, to confirm my Opinion of the Necessity of the Female Plant being impregnated by the Farina of the Male Plant, in order to render it fruitful. Accordingly I planted a Female Briony in a Garden, wherein there was no Male Plant of that Kind, nor in any of the neighbouring Parts, as I could discover; but, contrary to my Expectation, this Plant produced ripe Fruit, which I sowed soon after it was ripe, and the Spring following I had a great Number of young Plants came up. The following Year I was more curious to try the Experiment, and examined all the neighbouring Parts again, to see if I could discover any Male Plants, but could not; yet the Success was the same as the former Year, and the Plants which arose from the Seeds grew very strong and vigorous. So that this and many other Experiments should be frequently repeated, and carefully examined, before we can pronounce any thing for Certainty concerning the Generation of Plants.

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BUGLOSSUM; Buglofs.

The Species omitted in the former Volume are;

1. BUGLOSSUM *angustifolium majus, flore albo.* C. B. P. Greater narrow-leav'd Buglofs, with a white Flower.

2. BUGLOSSUM *angustifolium majus, flore rubro aut variegato.* C. B. P. Greater narrow-leav'd Buglofs, with a red or variegated Flower.

3. BUGLOSSUM *foliis sinuosis.* C. B. P. Buglofs, with sinuated Leaves.

4. BUGLOSSUM *sylvestre majus nigrum.* C. B. P. Greater wild black Buglofs.

5. BUGLOSSUM *Creticum majus, flore cœruleo purpurante.* H. R. Par. Greater Buglofs of Candy, with a blue Flower, inclining to a purple Colour.

6. BUGLOSSUM *Lusitanicum, echii folio undulato.* Inst. R. H. Portugal Buglofs, with an undulated Vipers Buglofs Leaf.

7. BUGLOSSUM *Creticum minimum odoratum, flore vario eleganti.* H. R. Par. The least sweet-scented Candy Buglofs, with an elegant Flower of various Colours.

8. BUGLOSSUM *Creticum humifusum acaulon perenne, echii folio angustissimo.* Tourn. Cor. Perennial Candy Buglofs, lying spread upon the Ground without Stalks, and with a very narrow Vipers Buglofs Leaf.

9. BUGLOSSUM *Samium frutescens, foliis rosmarini obscure virentibus, lucide hirsutis.* Tourn. Cor. Shrubby Buglofs from the Island of Samos, with Rosemary Leaves of a shining dark green Colour, and hairy.

10. BUGLOSSUM *orientale erectum, foliis undulatis, flore amœne cœruleo.* Tourn. Cor. Upright Eastern Buglofs, with undulated Leaves, and a Flower of a beautiful blue Colour.

11. BUGLOSSUM *orientale angustifolium, altissimum.* Tourn. Cor. The tallest Eastern Buglofs, with narrow Leaves.

The first and second Sorts here mentioned are Varieties of the Garden Buglofs, which is mentioned in the former Volume. These are preserved in botanick Gardens for the sake of Variety, and may be cultivated in the same manner as hath been directed in the former Volume; as may also the third, fourth, fifth and sixth Sorts, which are all hardy, and produce good Seeds in this Climate.

The seventh Sort is an annual Plant of an humble Growth, which seldom rises above three or four Inches high, but shoots out several Side-branches, which spread near the Surface of the Ground; at the Extremity of these Branches the Flowers are produced, which are of a beautiful red Colour, striped with white. This may be propagated by Seeds, which should be sown on a Bed of light fresh Earth, in the Place where it is designed to remain; because it doth not bear transplanting. When the Plants are come up, they should be cleared from Weeds; and where the Plants are too close together, they must be thinned, leaving them four or five Inches apart; after this they will require no farther Care, but to keep them constantly clear from Weeds. In June they will flower, and their Seeds will ripen in August,

gust, which if permitted to fall, will produce Plants in Autumn, which will abide thro' the Winter; and these autumnal Plants will be much stronger, and produce a greater Number of Flowers than those which are sown in the Spring.

The eighth and ninth Sorts are perennial Plants, which are somewhat tenderer than either of the former. These are propagated by Seeds, which should be sown on a warm Border of light fresh sandy Earth, early in the Spring, and when the Plants begin to appear, you must carefully clear 'em from Weeds, and where they are too close to each other you must draw out some of them, which may be transplanted into Pots filled with light fresh Earth, which may be placed under a common Hot-bed Frame in Winter, to protect them from hard Frost; for in severe Winters most of the Plants in the open Air will be destroyed, so that, unless you have some Plants in shelter, you may intirely lose the Kinds. Those Plants which are left in the Border where they were sown should be thinned, so as to leave them about eighteen Inches asunder, and must be constantly kept clean from Weeds, which is all the Culture they will require. The second Year they will produce Flowers and Seeds, but will continue several Years after, especially if they are in a dry rubbishy Soil, which is poor; for in a moist rich Earth they will grow very luxuriant in Summer, but are generally destroyed with the first Approach of Winter. These generally send forth tap roots, which run very deep in the Ground, so will not bear transplanting well, when they have acquired much Strength. The eighth Sort is a very low spreading Plant, so should be allowed more Room than the ninth, which grows upright, and becomes shrubby.

The tenth and eleventh Sorts are biennial Plants, which seldom abide after they have perfected their Seeds, which is usually the second Year after they were sown. These Plants are propagated by Seeds, in the same manner as the common Bugloss, but should have a warmer Situation, and a drier Soil, otherwise they will not live thro' the Winter in this Climate; therefore it will be proper to plant a few of these Plants into Pots while they are young, that they may be sheltered under a common Frame in Winter; and if the Spring following they are shaken out of the Pots carefully, so as to preserve the Earth about their Roots, and planted in a Bed of fresh Earth, they will grow much stronger, and produce a greater Number of Flowers, than if they remain in the Pots. But these Plants having tap Roots will not bear transplanting any better than the two former Sorts.

BUGULA; Bugle.

The Characters are;

It hath a Flower consisting of one Leaf, with one Lip divided into three Parts, the Middle of which is split into two: the Place of the under Lip is supplied by small Teeth. Out of the Flower-cup rises the Pointal, fixed like a Nail into the binder Part of the Flower, and attended,

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as it were, by four Embryo's, which afterwards become so many oblong Seeds, shut up in a Husk, which before was the Flower-cup. To these Notes may be added, that the Flowers are placed in Whorles round the Stalks.

The Species are;

1. BUGULA. *Dod. pempt.* Common Bugle.
2. BUGULA *flore cinereo vel albo. Inst. R. H.* Bugle with a white or ash-colour'd Flower.
3. BUGULA *Alpina maxima. Inst. R. H.* The greatest Bugle of the Alps.
4. BUGULA *sylvestris villosa, flore cæruleo. Inst. R. H.* Hairy Wood Bugle with a blue Flower.
5. BUGULA *sylvestris villosa, flore suaverubente. Inst. R. H.* Hairy Wood Bugle, with a fine red Flower.
6. BUGULA *sylvestris villosa, flore albo. Inst. R. H.* Hairy Wood Bugle, with a white Flower.
7. BUGULA *Samia verna, boraginis folio, flore inverso, & cæruleo flavescente. Tourn. Cor.* Samian Spring Bugle, with a borage Leaf, and an inverted Flower of a yellowish blue Colour.
8. BUGULA *orientalis villosa, flore inverso cæruleo, alba macula notato. Tourn. Cor.* Hairy Eastern Bugle, with an inverted blue Flower, spotted with White.
9. BUGULA *orientalis villosa, flore inverso candido, cum oris purpureis. Tourn. Cor.* Hairy Eastern Bugle, with an inverted white Flower, edged with Purple.
10. BUGULA *orientalis, flore ex violaceo purpurascente. Tourn. Cor.* Eastern Bugle, with a purplish Violet-colour'd Flower.
11. BUGULA *orientalis longifolia, flore majore intense cæruleo. Tourn. Cor.* Eastern Bugle, with a long Leaf, and a larger Flower, of an intense blue Colour.

The first and second Sorts grow wild in moist Woods and Meadows in most Parts of England, and continue in Flower from May to September. These Plants propagate themselves greatly by their creeping Stalks, which send forth Roots at every Joint, so that where they have room to spread, they will make a great Increase; but they are seldom preserved in Gardens.

The Bugle is greatly esteemed as a vulnerary Herb, and is used both internally and externally; it enters as an Ingredient into the vulnerary Decoctions of the Surgeons, and is commended, externally applied to Ulcers.

The third, fourth, fifth and sixth Sorts are preserved in botanick Gardens for the sake of Variety; these are very hardy Plants, and propagate greatly by their trailing Stalks, as the common Sort. They must have a moist Soil, and a shady Situation, where they will thrive exceedingly, without any other Culture, but to keep them clear from Weeds.

The seventh, eighth, ninth, tenth and eleventh Sorts were discovered by Dr. Tournefort in the Levant, who sent their Seeds to the Royal Garden at Paris, where they were propagated first in Europe, and from thence several other Gardens have been supplied with these Plants. They may be propagated by

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Seeds,

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Seeds, which should be sown on a shady Border, and a light moist Soil early in the Spring; and when the Plants begin to appear, they should be carefully cleared from Weeds, and in dry Weather must be frequently watered, otherwise they will not make any great Progress. When the Plants have acquired Strength enough to be removed, they should be transplanted, some into Pots, and the rest into a shady moist Border, where they may remain to flower. Those which are put into Pots should have a shady Situation during the Summer Season, and must be frequently watered in dry Weather; but in Winter they should be placed under a Hot-bed Frame, where they may be protected in sharp Frosts, but in mild Weather they should have as much free Air as possible, for they are so hardy as to endure the Cold of our ordinary Winters very well in the open Air without any Shelter.

These Plants may also be multiplied by parting of their Roots in the Spring, after the Manner of the *Auricula*; but you must be careful not to part them too small, lest you destroy them; for if each Head hath not good Roots, they seldom succeed, so that they are not to be increased very fast in this Method.

BULBOCASTANUM; Earth-Nut, or Pig-Nut.

The Characters are;

It is an umbelliferous Plant, with a Rose-shaped Flower, consisting of many Leaves, placed orbicularly, and sitting on the Empalement; which turns to a Fruit composed of small oblong smooth Seeds, which are sometimes channelled, gibbous on one Side, but plain on the other. To these Notes must be added, a fleshy tuberous Root.

The Species are;

1. **BULBOCASTANUM majus, folio apii.** C. B. P. Greater Earth-Nut, with a parsley Leaf.

2. **BULBOCASTANUM minus saxatile, peucedani folio.** Tourn. Smaller Rock Earth-Nut, with a Swines Fennel Leaf.

3. **BULBOCASTANUM majus Alpinum, pastinacæ folio.** Greater Alpine Earth-Nut, with a Parsnip Leaf.

4. **BULBOCASTANUM tenuitum inciso folio, lusitanicum.** Tourn. Portugal Earth-Nut, with a fine cut Leaf.

5. **BULBOCASTANUM Creticum, radice napi-formi.** Tourn. Cor. Candy Earth-Nut, with a Navew Root.

6. **BULBOCASTANUM Creticum, ferulæ folio, semine oblongo.** Tourn. Cor. Candy Earth-Nut, with a Giant Fennel Leaf, and oblong Seeds.

The first Sort is very common in shady Woods and Pastures in divers Parts of England, it rises early in the Spring, and flowers in May. In July the Seeds are ripe, soon after which time the green Leaves begin to decay, which is the proper Season to take up the Roots for Use, because they may be more readily found before their Leaves are quite decayed; and if they are taken up, while the Plants are in Vigour, the Roots will be small, and not

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near so firm. Some People dig up these Roots, and eat them raw, which taste very much like Chestnuts, and are no unpleasant Morsel; but when they are boiled, they are a very delicious Food, eaten with Butter and Pepper, and are esteemed very nourishing.

The other Sorts are not Natives of England, so are rarely to be found except in botanick Gardens, where they are preserved for the sake of Variety, more than any Beauty there is in their Appearance.

They are all very hardy Plants in respect to Cold, so may be easily propagated by sowing of their Seeds on a moist shady Border, soon after they are ripe (for if they are kept out of the Ground till Spring, they seldom succeed so well as when they are sown in Autumn). When the Plants appear in the Spring, they must be carefully cleared from Weeds, and where they are too near, they should be thinned, so as to leave them three or four Inches asunder; after this they will require no other Culture, but to keep them clear from Weeds; for they do not bear transplanting, so must be sown where they are to remain. The Autumn following the Roots will be fit for Use, and will continue good all the Winter, till they shoot up their Stems in the Spring for Seed, after which time they are tough, and not fit for eating.

BUPHTHALMUM; Ox-Eye.

The Species omitted in the former Volume are;

4. **BUPHTHALMUM tanacetii minoris folio incano, flore sulphureo amplissimo.** Boerb. Ind. Ox-Eye with hoary Tansey Leaves, and large sulphur-coloured Flowers.

5. **BUPHTHALMUM Creticum, cotulæ folio.** Breyn. Cent. Ox-Eye from Crete, with a May-weed Leaf.

The fourth Sort was sent from Austria to the Learned Dr. Boerhaave at Leyden; this is so nearly akin to the two Eastern Sorts, as not to be distinguished therefrom but by their hoary Leaves, and the Colour of the Flower. It must be treated in the same Manner as hath been directed for them.

The fifth Sort is an annual Plant; this is propagated from Seeds, which should be sown on a Bed of light fresh Earth; and when the Plants are come up two Inches high, they should be transplanted where they are to remain to flower, where they must be allowed at least a Foot to spread their Branches. They require no other Care but to keep them clear from Weeds; in July they will flower, and in Autumn they perfect their Seeds. Some botanick Authors have mentioned three or four Varieties of this Plant, but as they are accidental, and do all arise from the same Seed, so it is not worth while to enumerate them.

BUPLEURUM; Hare's Ear.

The Species omitted in the former Volume are;

1. **BUPLEURUM folio rigido.** C. B. P. Stiff-leav'd Hare's Ear.

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2. *BUPLEURUM folio subrotundo, sive vulgatissimum. Tourn.* The most common round-leav'd Hare's Ear.

3. *BUPLEURUM annuum angustifolium. Bot. Monsp.* Narrow-leav'd annual Hare's Ear.

4. *BUPLEURUM annuum minimum angustifolium. H. R. Par.* The least narrow-leav'd annual Hare's Ear.

5. *BUPLEURUM angustissimo folio. C. B. P.* Very narrow-leav'd Hare's Ear.

6. *BUPLEURUM perfoliatum rotundifolium annuum. Tourn.* Annual round-leav'd Hare's Ear, commonly called Thorough-wax.

7. *BUPLEURUM perfoliatum longifolium annuum. Tourn.* Annual long-leav'd perfoliated Hare's Ear.

8. *BUPLEURUM montanum latifolium. Tourn.* Broad-leav'd mountain Hare's Ear.

9. *BUPLEURUM montanum, flosculis exiguis. Tourn.* Mountain Hare's Ear, with small Flowers.

10. *BUPLEURUM Alpinum latifolium minus. Tourn.* Smaller broad-leav'd Hare's Ear of the Alps.

11. *BUPLEURUM Alpinum angustifolium majus. Tourn.* Greater narrow-leav'd Hare's Ear of the Alps.

12. *BUPLEURUM Alpinum angustifolium minus. Tourn.* Smaller narrow-leav'd Hare's Ear of the Alps.

13. *BUPLEURUM montanum, gramineo folio. Tourn.* Mountain Hare's Ear, with a grass Leaf.

14. *BUPLEURUM Hispanicum arborescens, gramineo folio. Tourn.* Spanish Tree Hare's Ear, with a grass Leaf.

15. *BUPLEURUM Hispanicum fruticosum aculeatum, gramineo folio. Tourn.* Prickly Spanish Shrub Hare's Ear, with a grass Leaf.

16. *BUPLEURUM Lusitanicum, gramineo longiori & rigidissimo folio. Tourn.* Portugal Hare's Ear, with a long rigid grass Leaf.

17. *BUPLEURUM Orientale angustifolium, semine longiori. Tourn. Cor.* Narrow-leav'd Eastern Hare's Ear, with a longer Seed.

The fifth and sixth Sorts are Natives of England, and grow on cultivated Places amongst the Corn in several Counties. The sixth Sort is placed amongst the medicinal Plants in the College Dispensatory, but is rarely used, tho' it has been formerly esteemed as a vulnerary Herb.

All these Sorts (excepting the fourteenth and fifteenth) are biennial Plants, which are extremely hardy, and may be propagated by sowing of their Seeds in Autumn, upon a Bed of fresh Earth, in almost any Situation, but they thrive best in the Shade. When the Plants are come up, they should be thinned where they come up too thick, and cleared from Weeds, which is all the Culture these Plants require; for if they are permitted to shed their Seeds, the Plants will come up, and maintain themselves without any Care.

The fourteenth and fifteenth Sorts are perennial Plants, which rise to the Height of six or seven Feet. These may be propagated by sowing their Seeds on a shady Border in Autumn, and when the Plants begin to appear,

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they should be cleared from Weeds, and in dry Weather they must be watered, which will greatly promote their Growth. When they are two Inches high, they should be transplanted into a Border at about six or eight Inches distance, observing to water and shade them until they have taken new Root; after which time they will require no farther Care, but to keep them clear from Weeds, and in very dry Weather to refresh them now and then with a little Water. In this Bed they may remain until the Beginning of September, when they should be carefully taken up, with a Ball of Earth to their Roots, and some of them planted amongst Shrubs in small Wilderness Quarters, where they will add to the Variety; but there should be a few planted into Pots, that they may be placed under a Frame in Winter, to shelter them from hard Frosts, which will often destroy them while they are young; but when they have acquired Strength, they will endure the Cold of our ordinary Winters very well.

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CAAPEBA.

This is an American Name for this Plant, and at present we have no English Name for it.

The Characters are;

It hath a Rose-flower, consisting of four Leaves, which are placed orbicularly, but are sterile; from the Middle arises the Pointal, which is plain, round, and umbilicated. The Embryo's grow at a separate Distance on the same Plants, which afterward become soft spherical Berries, including rough Seeds.

The Species are;

1. *CAAPEBA folio orbiculari & umbilicato laevi. Plum. Nov. Gen.* Caapeba with a round umbilicated Leaf.

2. *CAAPEBA folio orbiculari umbilicato tomentoso. Plum. Nov. Gen.* Caapeba with a round woolly umbilicated Leaf.

3. *CAAPEBA folio orbiculari non umbilicato. Plum. Nov. Gen.* Caapeba with a round Leaf, not umbilicated.

These Plants are Natives of the warmest Parts of America, where they twist themselves round whatever Trees or Shrubs grow near them, and sometimes rise to the Height of six or seven Feet. They are propagated by Seeds, which should be sown in Pots filled with fresh light Earth, early in the Spring. These Pots must be plunged into a moderate Hot-bed of Tanners-bark, and must be frequently refreshed with Water; when the Plants are come up about an Inch high, they should be transplanted into small Pots filled with light rich Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken new Root; after which time the Glasses should be raised in warm Weather every Day, to admit fresh Air to the Plants, and

and they must be frequently refreshed with Water. During the Summer Season they may remain in the Hot-bed, but at *Michaelmas* they must be removed into the Bark-stove, where they should have a moderate Degree of Heat, and must be frequently refreshed with Water. The second Year some of the strongest Plants will flower, and will continue several Years after.

CACALIANTHEMUM.

The Characters are ;

It hath a flosculous Flower, consisting of many Florets (like those of Groundsel); but the Florets are cut into four Segments, whereas those of Groundsel are divided into five Parts: The Cup of the Flower is also slenderer than that of the Groundsel.

The Species are ;

1. CACALIANTHEMUM folio nerii glauco. Hort. Elth. Cacalianthemum with a glaucous oleander Leaf, commonly called the Cabbage-tree.

2. CACALIANTHEMUM Africanum, ficoidis folio. African Cacalianthemum with a ficoides Leaf.

The first of these Plants was brought from the Canary Islands, and hath been several Years in the English Gardens; where it hath risen to the Height of eight or ten Feet, and has often produced Flowers in the Autumn, which fall off without bringing any Seed. It hath been by some unskilful Persons called the Cabbage-tree, but for no other Reason, than that the Stem of this Plant is soft, and has somewhat the Appearance of a Cabbage-stalk. By others it has been as improperly called the Carnation-tree, for no other Reason, than that it has long, narrow, glaucous Leaves; from whence some Writers in Botany have called it *Arbor lavendulae folio*; i. e. a Tree with a Lavender Leaf; but as the Flower and Seeds nearly agree with the *Cacalia*, so Dr. Dillenius has given it the Epithet of *Cacalianthemum*; to which I have taken the Liberty to add the second Sort, as being of the same Genus, by Flower and Seeds, tho' it has been commonly known by the Epithet *Senecio*.

The first of these Plants may be propagated by Cuttings; which should be taken off toward the latter End of May, and laid in a shady Part of the Green-house, for a Fortnight or three Weeks, that the Part where it was cut may be perfectly dry and healed over, otherwise it is very subject to rot. These Cuttings should be planted in Pots filled with a sandy Earth, mixed with a little Lime Rubbish, and then plunged into a moderate Hot-bed; observing to shade them in the Heat of the Day, as also to admit the Air, by raising the Glasses; and every three or four Days they should be refreshed with Water; but you must not give them too much Water, lest you rot them.

When the Cuttings are rooted (which may be known by their putting forth new Leaves) they should be enured to the open Air by Degrees; into which they must be removed towards the End of July, or the Beginning of

August, that they may be hardened before Winter; but they must be placed in a well-sheltered Situation, where they may be screened from Winds, and shaded from the Mid-day Sun. In this Place they should remain until the End of September, or Beginning of October; when they must be removed into the Green-house, and placed near the Windows, that they may enjoy the free Air, until the End of October; when the more hardy Plants are removed into the House, and the whole Number of Plants are disposed in the Order they are to remain during the Winter Season: Therefore at this time you must place these Plants in the Middle of the House, where they may be best defended from Cold. During the Winter Season these Plants must be watered but little; for much Wet at that time is apt to rot them: But however, they must not be kept too dry; for then they will often shrink, which is equally destructive to them. In the Summer these Plants may be placed abroad in a well-sheltered Situation, with *Sedums*, *Cotyledons*, and other succulent Plants; observing to refresh them often with Water in dry Seasons: and as the Plants advance, so they should be removed into larger Pots; always observing to plant them in light sandy Earth, mixed with Lime Rubbish, in which they will thrive much better than in richer Earth.

The second Sort is now very common in England, though it has not been near so long an Inhabitant of our Gardens as the former. This is a Native of the Country about the Cape of Good Hope; from whence it was brought to the Gardens in Holland, where it was first propagated in Europe, and hath been since communicated to most Parts of Europe. This Plant may be easily propagated by Cuttings, which may be taken from the old Plants any time during the Summer Season. These must be laid by to dry, as was directed for the former Sort, and may be managed in the like Manner. This Plant may be treated in a hardier manner than the former, but must not have too much Wet in Winter. This flowers every Year with us, and will grow to be six or eight Feet high. The greatest Beauty of this Plant consists in its fine, glaucous, succulent Leaves; which, when broken, emit a strong Scent somewhat like Turpentine; from whence some Persons have given it the Name of Balm of Gilead Tree, though very improperly.

CACALIA.

This Plant hath no English Name.

The Characters are ;

It hath a flosculous Flower, consisting of many Petals, divided into four Parts, sitting on the Embryo, and contained in an almost cylindrical Empalement. The Embryo afterward becomes a Seed, furnished with Down.

The Species are ;

1. CACALIA tomentosa. C. B. P. Woolly Cacalia.

2. CACALIA foliis crassis hirsutis. C. B. P. Cacalia with thick hairy Leaves.

3. CACALIA

3. *CACALIA foliis cutaneis acutioribus & glabris. C. B. P.* Cacalia, with smooth-pointed Leaves.

4. *CACALIA Pyrenaica, alliariae folio. Tourn.* Pyrenean Cacalia, with an Alliaria Leaf.

5. *CACALIA Alpina foliis utrinque denso & candidissimo tomento obsitis. Tourn.* Cacalia of the Alps, whose Leaves are covered on both Sides with a thick white Down.

6. *CACALIA Virginiana glabra, foliis deltoideis sinuatis subtus glaucis. Moris.* Smooth Virginian Cacalia, with sinuated Leaves, which are of a Sea-green Colour on their Underside.

7. *CACALIA foliis rotundioribus, ad caulem sessilibus. Mor.* Cacalia, with round Leaves sitting close to the Stalk.

These Plants do most of them grow wild on the mountainous Parts of *Austria*, the Alps and *Pyrenean* Mountains, from whence they have been obtained by some curious Botanists, who preserve them in their Gardens for the Sake of Variety. The sixth Sort was found in *Virginia*, from whence it was brought to *Europe*.

They are all of them very hardy Plants in respect to Cold, therefore they must have a cool shady Situation, and should be planted in a strong fresh Earth, which has not been dunged. They may be propagated by parting of their Roots in Autumn; and require no other Culture but to keep them clear from Weeds, and in very dry Weather to water them two or three times a Week.

They may also be propagated by Seeds, but these should be sown as soon as possible after they are ripe, for they will not grow, if they are kept long out of the Ground. These Seeds should be sown in Pots filled with fresh loamy Earth, and placed in a shady Situation. In the Spring the Plants will appear, when they must be carefully weeded, and in dry Weather should be frequently refreshed with Water, which will greatly forward the Plants in their Growth. In Autumn they must be transplanted into a shady Border, at about a Foot a-part, where they may remain to flower.

CACAO; The Chocolate-nut.

The Characters are;

It hath a Rose-flower, consisting of a great Number of Petals, from whose many-leav'd Empalement arises the Pointal, which is a Tube cut into many Parts, which afterward becomes a Fruit shaped somewhat like a Cucumber, and deeply furrowed, in which are contained several Seeds, collected into an oblong Heap, and are slit down somewhat like Almonds.

We have but one Species of this Plant; which is,

CACAO. Clus. Exot. The Chocolate-nut Tree.

This Tree is a Native of *America*, and is found in great Plenty in several Places between the Tropicks, but particularly at *Carraca* and *Carthagera*, on the River *Amazons*, in the Isthmus of *Darien*, at *Honduras*, *Guatemala*, and *Nicaragua*. At all these Places it grows wild without Culture, but it is cultivated in many of the Islands which are possessed by the *French* and *Spaniards*, and was formerly planted in some of the Islands which are in the Possession of the *English*; but it has been neg-

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lected for many Years past, so that at present it is so scarce in those Places that the *English* are supplied with it by the *French* and *Spaniards*, who make the Inhabitants pay them a good Price for it; and as there is a great Quantity of it consumed by the *English*, so consequently it must make an Alteration in the Balance of Trade, greatly to the Prejudice of the *English*, which might be easily remedied if the Planters in our Colonies were but the least industrious, since as it formerly did grow on those Islands, so as to produce not only a sufficient Quantity for their own Consumption, but did supply *England* with great Quantities, so there can be no Objection to the planting of it in those Islands again, especially, since Sugars are become so bad a Commodity, that the Planters are most of them greatly reduced, and unless they can improve their Estates by some other Commodity, must be ruined in a few Years.

I shall therefore subjoin the best Account of this Plant, with the Culture which it requires in those Countries, with the Profits which arise from it, to those who have planted some of these Trees of late Years, by way of Experiment; and shall afterwards give Directions for the cultivating of it in *England*, by way of Curiosity.

In the making of a Plantation of Chocolate-Trees you must first be very careful in the Choice of the Situation and the Soil, otherwise there will be small Hopes of Success. As to the Situation, it should be in a Place where the Trees may be protected from strong Winds, to which if they are exposed, they will soon be destroyed. So that in such Places where Torrents of Water have washed away the Earth, so as to leave broad and deep Furrows, (which the Inhabitants of those Islands call *Gullies*) these Trees will thrive exceedingly. And as these are very frequently to be found in those Islands, and many of them being of large Extent, so it may be a great Improvement to some Estates, which at present are of small Value. The Soil in these *Gullies* is generally rich and moist, which is what these Trees require, so that they will make great Progress in these Places, as hath been experienced by some few Persons who have lately cultivated some of these Plants. But where there are not a sufficient Number of these *Gullies*, Choice should be made of a Situation which is well sheltered by large Trees, or if there are not Trees already grown, there should be three or four Rows planted round the Spot which is designed for the Chocolate-Trees; of such Sorts which are of quickest Growth; and within these Rows there should be some Plantain-Trees, planted at proper Distances, which being very quick of Growth, and the Leaves being very large, will afford a kindly Shelter to the young Chocolate-Trees, which are placed between them.

The Chocolate-Trees which are cultivated seldom grow to be more than fourteen or fifteen Feet in Height, nor do they spread their Branches very wide, so that if the Plantain-Trees are placed in Rows about twenty-four Feet asunder, there will be Room enough for two Rows of Chocolate-Trees between each

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Row

Row of Plantains; and if they are planted at ten Feet Distance in the Rows it will be sufficient Room for them. Those Trees which are found wild in uncultivated Places, are generally of much larger Growth, which may be occasioned by the other Trees, amongst which these are found growing; for being protected from the Winds by those, they are not so much in Danger therefrom, as those which are cultivated; and the other Trees closely surrounding of them, will naturally draw them up to a greater Height. However, that is not a desirable Quality in these Trees, for the lower they are the better the Fruit may be gathered without injuring of the Trees, and the less they are exposed to the Injuries of the Weather. So that the Inhabitants never desire to have their Trees above twelve or fourteen Feet high.

The Soil which these Trees thrive to most Advantage upon, is a moist, rich, deep Earth, for they generally send forth one tap Root, which runs very deep into the Ground, so that where-ever they meet with a rocky Bottom near the Surface, they seldom thrive, nor are they of long Continuance; but in a rich deep moist Soil they will produce Fruit in pretty good Plenty the third Year from Seed, and will continue fruitful for several Years.

Before the Plantation is begun, the Ground should be well prepared by digging of it deep, and clearing it from the Roots of Trees and noxious Plants, which if suffered to remain in the Ground, would shoot up again after the first Rain, and greatly obstruct the Growth of the Plants, and it will be almost impossible to clear the Ground from those Roots, after the Chocolate-Plants are come up, without greatly injuring them.

When the Ground is thus prepared, the Rows should be marked out by a Line, where the Nuts are to be planted, so as that they may be placed in a quincunx Order, at equal Distance every way, or at least that the Plantain-Trees between them, may form a Quincunx, with the two Rows of Chocolate-Trees, which are placed between each Row of them.

In making a Plantation of Chocolate-nut-Trees, the Nuts must be planted where the Trees are to remain, for if the Plants are transplanted, they seldom live, and those which may survive it, will never make thriving Trees; for as I before observed, these Trees have a tender tap Root, which if broken, or any way injured, the Tree commonly decays.

The Nuts should always be planted in a rainy Season, or at least when it is cloudy Weather, and some Hopes of Rain falling soon after. As the Fruit ripens at two different Seasons, (*viz.*) at *Midsummer*, and at *Christmas*, so the Plantation may be made at either of those; but the chief Care must be to choose such Nuts as are perfectly ripe and sound, otherwise the whole Trouble and Expence will be lost. The Manner of planting the Nuts is, to make three Holes in the Ground, within two or three Inches of each other, at the Place where every Tree is to stand; and into each of these Holes should be one sound Nut planted about two Inches deep, covering of them gently

with Earth. The Reason for putting in three Nuts at every Place is, because they seldom all succeed, or if most of them grow, the Plants will not be all equally vigorous; so that when the Plants have had one Year's Growth, it is very easy to draw up all the weak unpromising Plants, and leave those which are the most vigorous; but in doing of this, great Care should be had to the Plants which are to remain, so as not to injure or disturb their Roots in drawing the other out.

It is very proper to observe, that the Chocolate-Nuts will not retain their growing Faculty long after they are taken from the Trees, so that there is no possibility of transporting them to any great Distance for planting; nor should they be kept long out of the Ground, in the natural Places of their Growth. There are some Authors who have wrote the History of this Tree, and distinguish three different Sorts of the Nuts, from the Colour of their Skins, one of which is of a whitish green Colour, one of a deep red, and the third of a red and yellow Colour; but these are not specifically different, but do all arise from Seeds of the same Tree, as is the Case of our Filberts, which differ in the Colour of their Skins, but are of the same Colour within, and have the same Taste. There are others, who would distinguish these Nuts by their Size and Form, some being large and thick, others almost as flat as Beans; but these Differences (I have been credibly informed) arise from some Accident, as those Trees which are young and vigorous, and grow upon a rich deep Soil, will always produce larger and better nourished Fruit than those which stand on a shallow dry Ground, and are unthriving Trees. As will also the Age of a Tree make a great Alteration in the Size of the Fruit; for old Trees are generally observed to produce smaller and flatter Nuts than those which are young, or than the same Trees did bear while they were vigorous.

When the Chocolate-Trees first appear above Ground, they are very tender, and subject to great Injuries from the strong Winds, the scorching Sun, or great Droughts; for which Reason the Planters are obliged to guard against all these Enemies, first by making Choice of a sheltered Situation, or at least by planting Trees to form a Shelter; and, if possible, to have the Plantation near the River, for the Conveniency of watering the Plants the first Season, until they have made strong Roots, and are capable of drawing their Nourishment from some Depth in the Earth, where they meet with Moisture. But in order to shelter the Plants from the scorching Rays of the Sun, they generally plant two Rows of Cassada between each Row of Chocolate-Trees, which will grow about seven or eight Feet high, so will screen the young Plants from the Violence of the Sun, the first Season; after which time they will be in less Danger of Injury therefrom; and the following Season, when the Cassada is taken up for Use, the Ground should be worked between the young Plants, being very careful not to injure their Roots by this Operation. This Method of planting the Cassada between the young Chocolate-Trees, is

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of great Advantage to the Planter; for when the Roots of the Cassada are taken up for Use, it will defray the Expence of keeping the Ground clean from Weeds, without which the young Plants would come to nothing. The Plantains also, which will be fit to cut in about twelve Months after planting, will defray the whole Expence of preparing the Ground, so that the Produce of the Chocolate-Trees, will be neat Profit; for as the Plantains produce Fruit and decay, so they will be succeeded by Suckers, which will produce Fruit in eight Months after, whereby there will be a continual Supply of Food for the Negroes, which will more than pay for keeping the Ground wrought, and clear from Weeds until the Chocolate-Trees begin to produce Fruit, which is generally the third Year after planting.

The Planters usually plant the Plantain-Trees two or three Months before the Chocolate-Nuts are ripe, that they may be so large as to afford Shelter to the young Plants when they come up, and the Cassada is always planted a Month or six Weeks before the Chocolate-Nuts, for the same Reason. Some People plant Potatoes, others Cucumbers and Melons, or Water-Melons, between the Rows of Chocolate-Plants, which, they say, will prevent the Weeds from rising to injure the young Plants; for as these do all of them trail upon the Ground, so they occupy the whole Surface, and prevent the Weeds from growing; but where this is practised it should be done with great Caution, lest by being over covetous you injure the young Chocolate-Nuts so much, as that they may never recover it. Therefore great Care should be taken to reduce the Shoots of these Plants, whenever they approach the Chocolate-Trees, otherwise they will soon greatly injure, if not totally destroy them.

In about seven or eight Days after the Chocolate-Nuts are planted, the young Plants will begin to appear above Ground, when they should be carefully looked over to see if any of them are attacked by Insects, in which Case, if the Insects are not timely destroyed, they will soon devour all the young Plants. Or if there should be any Weeds produced near the Plants, they should be carefully cut down with a Hough, in doing of which great Care should be taken that the tender Shoot is not injured. About twenty Days after the Plants have appeared, they will be five or six Inches high, and have four or six Leaves, according to the Strength of the Plants. These Leaves are always produced by Pairs, opposite to each other, as are also the Branches; so that they make very regular handsome Heads, if they are not injured by Winds. In ten or twelve Months they will be two Feet and an half high, and have fourteen or sixteen Leaves; by this time the Cassada which was planted between the Rows of Chocolate-Plants, will have large Roots fit for Use, so should be then taken up, and the Ground being then wrought over again, will greatly encourage the young Plants.

In two Years time the Plants will have grown to the Height of three Feet and a half, or sometimes four Feet, many of which will begin to flower; but the careful Planters always pull off

all these Blossoms, for if they are permitted to remain to produce Fruit, they will so much weaken the Trees that they seldom recover their Strength again, so as to make vigorous Trees. When these Plants are two Years and a half old, they will produce Flowers again, some of which are often left to produce Fruit, but the more curious Planters pull off all these, and never leave any to produce Fruit until the third Year, when they leave but a few in proportion to the Strength of the Trees; by which Method their Trees always produce larger and better nourished Fruit than those which are suffered to bear a larger Quantity, and the Trees will continue much longer in Vigour. The fourth Year they suffer their Trees to bear a moderate Crop, but they generally pull off some of the Flowers from those Trees which are weak, that they may recover Strength before they are too old.

From the time when the Flowers fall off to the Maturity of the Fruit, is about four Months; it is easy to know when the Fruit is ripe by the Colour of the Pods, which become yellow on the Side next the Sun. In gathering of the Fruit they generally place a Negro to each Row of Trees, who, being furnished with a Basket, goes from Tree to Tree, and cuts off all those which are ripe, leaving the others for a longer time to ripen. When the Basket is full, he carries the Fruit and lays it in a Heap at one End of the Plantation, where, after they have gathered the whole Plantation, they cut the Pods lengthwise, and take out all the Nuts, being careful to divest them of the Pulp which closely adheres to them; and then they carry them to the House, where they lay them in large Casks, or other Vessels of Wood raised above Ground, and cover them with Leaves of the Indian Reed and Mats, upon which they lay some Boards, putting some Stones thereon to keep them down close, in order to press the Nuts. In these Vessels the Nuts are kept four or five Days, during which time they must be stirred and turned every Morning, otherwise they will be in danger of perishing from the great Fermentation they are usually in. In this time they change from being white to a dark red or brown Colour. Without this Fermentation they say the Nuts will not keep, but will sprout, if they are in a damp Place, or shrivel and dry too much, if they are exposed to Heat.

After the Nuts have been thus fermented, they should be taken out of the Vessels, and spread on coarse Cloths, where they may be exposed to the Sun and Wind; but at Night, or in rainy Weather, they must be taken under Shelter, otherwise the Damp will spoil them. If the Weather proves fair, three Days time will be long enough to dry them, provided they are carefully turned from time to time, that they may dry equally on every Side. When they are perfectly dry they may be put up in Boxes or Sacks, and preserved in a dry Place, until they are shipp'd off, or otherwise disposed of. The fresher these Nuts are, the more Oil is contained in them, so that the older they are the less they are esteemed.

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These Trees do not produce their Fruit on the young Branches, or at their Extremities, as do most other Trees; but from the Trunk and the larger Branches come out the Buds for Flowers and Fruit. While the Trees are young they do not produce their Fruit in great Plenty, for before the Trees are eight Years old they reckon it a good Crop to have twenty-eight or thirty Pods on each Tree at one Gathering, especially that at *Midsummer*, which is always a much worse Crop than the *Christmas* Season, which is occasioned by the much greater Drought of the Spring; for the Autumns being the rainy Seasons, the Chocolate-Trees produce a much greater Quantity of Fruit. When the Trees are full grown and vigorous, they will sometimes produce two Hundred, or two Hundred and forty Pods, at one Season, which will make ten or twelve Pounds of Chocolate, when dried, so that it is a very profitable Commodity, and can be managed with very little Charge, when compar'd with Sugar. I have been credibly inform'd by a Person of great Worth and Integrity, who resided some Years in *America*, that he has seen as much Chocolate gathered from one Tree in a Year, as hath been worth thirty Shillings Sterling on the Spot; so that as the Trouble of gathering and preparing for the Market being much less than for many other Commodities which are manufactured in the *British* Colonies, it is surprizing it should be neglected, especially as it is such a great Part of Sustenance to the better Sort of Inhabitants of those Colonies, that they cannot live comfortably without it, and purchase it from the *French* and *Spaniards* at a considerable Price, which must greatly impoverish the Colonies in time.

The Chocolate-Trees, if planted on a good Soil, and are properly taken Care of, will continue vigorous and fruitful twenty-five or thirty Years; so that the Charge of cultivating a Plantation of these Trees must be much less than that of Sugar, which must be annually planted; for altho' the Ground between the Rows of Plants will require to be often houghed and wrought, yet the first working of a Ground to make a new Plantation of Sugar, Indigo, Cassada, &c. is a larger Expence than the after Workings are. Besides, Sugar-canes require as much Labour in their Cultivation as any Plant whatever; and since the Insects which destroy the Sugar-canes, have spread so much in the *British* Colonies, nothing is a more uncertain Crop than Sugar, for which Reason I think it would be greatly worth the Planters Care, who are possessed of proper Lands for the Chocolate-Trees, to make some small Trials at least to be convinced of the Truth of this Fact.

The Leaves of these Trees being large, make a great Litter upon the Ground when they fall; but this is not injurious, but rather of Service to the Trees; for the Surface of the Ground being covered with them, they preserve the Moisture on the Surface, which is of great Use to the young tender Roots which are just under the Surface; and when the Leaves are rotten, they may be buried in digg-

ing of the Ground, and it will serve as good Manure. Some Planters let the Pods in which the Chocolate is inclosed, lie and rot in a Heap; (after they have taken the Nuts out) which they also spread on the Ground instead of Dung. Either of these Manures are very good, provided they are well rotted before they are lay'd on the Ground; and great Care should be had, that no Vermin should be carried on the Plantation with the Dung.

Besides the ordinary Care of digging, houghing, and manuring the Plantations of Chocolate-Trees, there is also another Thing requisite in order to their doing well, which is, that of pruning the decayed Branches off, and to take off small ill-placed Branches, where-ever they are produced. But you should be cautious how this Work is performed, for there should be no vigorous Branches shortened, nor any large Amputations made on these Trees; for they abound with a soft glutinous milky Juice, which will flow out for many Days whenever they are wounded, which greatly weakens the Trees. However, such Branches whose extreme Parts are decayed, should be cut off, to prevent the Infection from going farther on; and such Branches as are much decayed, should be taken off close to the Stem of the Tree; but this Operation should be performed in dry Weather, soon after the Crop of Fruit is gathered.

Some People perhaps may imagine, that what I have directed is a tedious laborious Work, and not to be performed by a few Slaves, but this is a great Mistake; for I have been credibly inform'd, that five or six Negroes will cultivate a Plantation of ten Thousand of these Trees, provided they are properly instructed, which is a small Number, when compared to the Quantity necessary to cultivate a Sugar Plantation of the like Extent of Ground. And when the Profits of both are compared, there will be a great Difference; for supposing we set the Price of five Shillings, for the Produce of each Tree, when grown, *per Annum*, (which I think is being very moderate, considering what has been related) then a Plantation of ten Thousand Trees will produce twenty-five Hundred Pounds a Year, which to be managed by six or seven Negroes, without the Expence of Furnaces, &c. is a much greater Profit than I believe can be made from any other Commodity.

In order to cultivate this Plant in *Europe*, by way of Curiosity, it will be necessary to have the Nuts planted into Boxes of Earth (in the Countries where they grow) soon after they are ripe (because if the Nuts are sent over they will lose their growing Quality before they arrive). These Boxes should be placed in a shady Situation, and must be frequently watered, in order to forward the Vegetation of the Nuts. In about a Fortnight after the Nuts are planted, the Plants will begin to appear above Ground; when they should be carefully watered in dry Weather, and protected from the violent Heat of the Sun, which is very injurious to these Plants, especially while they are young; they should also be kept very clear from Weeds, which if suffered to grow in the

the Boxes. will soon over-bear the Plants, and destroy them: When the Plants are grown strong enough to transport, they should be shipped, and placed where they may be screen'd from strong Winds, salt Water, and the violent Heat of the Sun. During their Passage they must be frequently refresh'd with Water, but it must not be given to them in great Quantities, lest it rot the tender Fibres of their Roots, which will destroy the Plants; and when they come into a cool Latitude, they must be carefully protected from the Cold, when they will not require so frequently to be watered; for in a moderate Degree of Heat, if they have gentle Waterings twice a Week, it will be sufficient.

When the Plants arrive in England, they should be carefully taken out of the Boxes, and each transplanted into a separate Pot filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, being careful to cover the Glasses in the Heat of the Day, to screen the Plants from the Sun; they must also be frequently watered, but it must be done with Caution, not to rot their Roots; in this Hot-bed the Plants may remain till Michaelmas, when they must be remov'd into the Bark-stove, and plunged into the Tan, in the warmest Part of the Stove. During the Winter Season the Plants must be frequently refreshed with Water, but it must be given to them in small Quantities, but in Summer they will require a more plentiful Share. These Plants are too tender to live in the open Air in this Country, even in the hottest Season of the Year, so they must constantly remain in the Bark-stove, observing in very warm Weather to let in a large Share of fresh Air to them, and in Winter to keep them very warm: As the Plants increase in Bulk, so they should be shifted into larger Pots, in doing of which there must be particular Care taken not to tear or bruise their Roots, which often kills the Plants, nor must they be placed in Pots too large, because that is a slow but sure Death to them: The Leaves of these Plants must be frequently washed, to clear them from Filth, which they are subject to contract by remaining constantly in the House, and this becomes a Harbour for small Insects, which will infest the Plants, and destroy them, if they are not timely washed off: If these Rules are duly observed, the Plants will thrive very well, and may produce Flowers in this Climate, but it will be very difficult to obtain Fruit from them; for, being of a very tender nature, they are subject to many Accidents in a cold Country.

CACHRYS.

We have no English Name for this Plant.

The Characters are;

The Flowers grow on an Umbel, which consist of many Petals ranged circularly, and expand in Form of a Rose, these rest on the Empalement, which turns to a Fruit, composed of two Parts, which are half oval, sometimes smooth, and sometimes rough and channelled, containing Seeds which resemble Barley-corns.

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The Species are;

1. CACHRYS *semine fungoso sulcato aspero, foliis ferulaceis.* Mor. Umb. Cachrys, with a fungous, furrowed, rough Seed, and Fennel-giant Leaves.

2. CACHRYS *semine fungoso sulcato aspero, foliis peucedani latiusculis.* Mor. Umb. Cachrys, with a fungous furrowed rough Seed, and broadish Hogs-fennel Leaves.

3. CACHRYS *semine fungoso sulcato plano majore, foliis peucedani angustis.* Mor. Hist. Cachrys, with larger plain furrow'd fungous Seed, and narrow Hogs-fennel Leaves.

4. CACHRYS *semine fungoso sulcato plano minore, foliis peucedani.* Mor. Umb. Cachrys, with smaller plain furrow'd fungous Seed, and Hogs-fennel Leaves.

5. CACHRYS *Hungarica, panacis folio.* Tourn. Hungarian Cachrys, with an All-heal Leaf.

6. CACHRYS *foliis pucedani, semine fungoso sulcato aspero minori.* Tourn. Cachrys, with Hogs-fennel Leaves, and small rough fungous Seed.

7. CACHRYS *Cretica, angelica folio, asphodeli radice.* Tourn. Candy Cachrys, with an Angelica Leaf, and an Asphodel Root.

8. CACHRYS *Orientalis, ferula folio, fructu alato plano.* Tourn. Cor. Eastern Cachrys, with a Fennel-giant Leaf, and a plain winged Seed.

These Plants are all propagated by Seeds, which should be sown soon after they are ripe, for if they are kept out of the Ground until the following Spring, they often miscarry, and when they succeed, they never come up until the Spring after, so that by sowing them in Autumn a whole Year is saved, and the Seeds seldom miscarry. These Seeds should be sown on a shady Border, where the Plants are to remain, for the Plants having long Tap Roots do not bear transplanting so well as many other Kinds: The Distance to be observ'd for the sowing of their Seeds should be two Feet apart; so if each kind is sown in a Drill, when the Plants are come up, they may be thinned, leaving two or three of the most promising Plants of each kind to remain: These Plants will begin to appear early in April, when they must be carefully clear'd from Weeds, and in dry Weather they should be watered gently, which will greatly promote their Growth the first Year; after which time they will require no farther Care but to keep them clean from Weeds, and every Spring to dig the Ground carefully between them.

These Plants decay to the Ground every Autumn, and come up again in the Spring; they commonly flower in the Beginning of May, and their Seeds are ripe in August; their Roots sometimes run down three or four Feet deep in the Earth, provided the Soil be light, and are often as large as Parsnips: They will continue many Years, and if the Soil is moist and rich, they will annually produce good Seeds, but when they grow on a dry Soil, the Flowers commonly fall away, and are not succeeded by Seeds.

There is but little to be said of the Uses of this Genus of Plants: The Hungarians in the Neighbourhood of Erlaw, as also those who

border on *Transylvania*, *Servia*, &c. eat the Root of the Fifth Species in a Scarcity of Corn, for Want of other Bread.

CÆSALPINA.

This Plant was so named by Father Plumier, who discover'd it in America, in Honour to Andreas Cæsalpinus, who was an eminent Botanist, and one of the first Writers on a Method of classing Plants.

We have no English Name for this Plant.

The Characters are;

It hath a Flower of an anomalous Figure, consisting of one Leaf, which is divided into four unequal Parts; the upper Part is large and hollowed like a Spoon. From the Bottom of the Flower arises the Pointal, amongst many incurved Stamina, which afterward becomes a Pod, including oblong Seeds.

We have but one Sort of this Plant, viz.

CÆSALPINA polyphylla, aculeis horrida. Plum. Nov. Gen. Many-leav'd Cæsalpina, with large Thorns.

This Plant is a Native of *America*, where it rises to the Height of fourteen or sixteen Feet, the Trunk and Branches being arm'd with very strong Thorns, so that it is difficult to pass where they are in Plenty. It was found at *Campechy* by the late Doctor *Houftoun*, who sent the Seeds into *England*, from which some of these Plants were raised.

This Plant is propagated by Seeds, which should be sown in small Pots filled with light rich Earth early in the Spring, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth as often as it appears dry, in order to promote the Vegetation of the Seeds; and if the Nights should prove cold, the Glasses of the Hot-bed should be cover'd with Mats, to keep the Bed in a moderate Warmth: In about two Months after the Plants will begin to appear, when they must be carefully clear'd from Weeds, and frequently refresh'd with Water, and in warm Weather the Glasses of the Hot-bed should be raised in the middle of the Day, to admit fresh Air to the Plants, which will greatly strengthen them: When the Plants are about three Inches high, they should be carefully taken out of the Pots, and each transplanted into a separate small Pot filled with light fresh Earth, and plunged into the Hot-bed again, observing to water them, and screen them from the Heat of the Sun, until they have taken new Root, after which time the Glasses of the Hot-bed should be raised every Day, in proportion to the Heat of the Weather, to admit fresh Air to the Plants, and they must be duly watered, and kept clear from Weeds; in this Hot-bed the Plants may remain until they touch the Glasses with their Tops, when they will be in Danger of being scorch'd by the Sun, which will retard their Growth; therefore whenever they are grown so tall as to touch the Glasses with their Tops, they should be removed into the Stove, and plunged into the Bark-bed, where they may have Room to grow. These Plants being tender, should always be kept in the Bark-stove, and have a moderate Share of Heat in Winter, and being

plac'd amongst other tender Exotick Plants of the same Country, will afford an agreeable Variety.

CAINITO. [This is the *American* Name, by which the *Indians* called this Tree, according to *Oviedo*] Star-Apple, *vulgo*.

The Characters are;

It hath an open Bell-shap'd Flower, consisting of one Leaf, and cut into several Segments towards the Top; from whose Cup arises the Pointal, which afterward becomes a globular or olive-shap'd soft, fleshy Fruit, inclosing a Stone of the same Shape.

The Species are;

1. *CAINITO folio subtus aureo, fructu mamiformi. Plum. Nov. Gen. The Star-Apple, vulgo.*

2. *CAINITO folio subtus aureo, fructu oliviformi. Plum. Nov. Gen. Cainito with olive-shap'd Fruit.*

These Plants grow in the warmest Parts of *America*, where the Fruit of the first Sort is eaten by way of Desert: This Tree grows to the Height of thirty or forty Feet, and has a straight smooth Stem, regularly beset with Branches, which are adorn'd with Leaves of a shining green Colour on their upper Sides, but of a russet Colour underneath; from the setting on of the Footstalks of the Leaves comes out the Flowers, which have no great Beauty, but are succeeded by the Fruit, which is about the Size of a large Apple, and of the same Shape.

The other Sort is not so common in our Settlements in *America*, but grows very plentifully in the *Spanish West-Indies*, from whence I have receiv'd Seeds of this and the former kind.

They are both propagated by Seeds, which should be sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to refresh the Earth often with Water, in order to promote the Vegetation of the Seeds: When the Plants are come up three Inches high, they should be shaken out of the Pots, and carefully parted; then put each into a separate small Pot filled with fresh Earth, and plunge them into the Hot-bed again, being careful to shade the Glasses until the Plants have taken new Root, after which time they should have Air and Water in proportion to the Warmth of the Season; when the Plants have grown so much as that their Roots are confin'd by these Pots, they should be shifted into larger, always observing to preserve a Ball of Earth to their Roots.

These Plants will not bear the cold of our Air in Summer, so must always be preserv'd in the Bark-stove, and treated after the manner directed for the Coffee-tree; with this Management the Plants will thrive exceedingly, and it is hoped, will soon produce Flowers in *England*.

CAKILE, Sea-Rocket.

The Characters are;

It hath a cross-shap'd Flower, consisting of four Petals, from whose Cup arises the Pointal, which afterward becomes a Fruit, resembling the Point of a Spear, and is jointed, in each of which Divisions

visions is lodged one Seed, which is for the most part oblong.

The Species are;

1. *CAKILE maritima, ampliore folio. T. Cor.* Sea-Rocket, with a larger Leaf.
2. *CAKILE maritima, angustiore folio. T. Cor.* Sea-Rocket, with a narrow Leaf.
3. *CAKILE Græca arvensis, filiqua striata brevi. T. Cor.* Greek Sea-Rocket, with a short striated Pod.
4. *CAKILE Orientalis, fructu minimo verrucoso. T. Cor.* Eastern Sea-Rocket, with a small warted Fruit.

The two first Sorts grow wild in divers Parts of Europe on the Sea-shore, where the Salt Water generally flows: The second Sort is pretty common in England, but the first hath not been found wild in this Country: The third and fourth Sorts were discovered by Doctor Tournefort, who sent their Seeds to the royal Garden at Paris.

They are all annual Plants, their Seeds should be sown in Autumn, soon after they are ripe, in the Place where they should remain, for they will not bear transplanting well; when the Plants are come up, they should be kept clear from Weeds, and where they are too close, they must be thinned, so as to leave them four or five Inches asunder, which is all the Culture they require; in June they will flower, and their Seeds will ripen in August; there is no Beauty or Use in these Plants at present known, but they are preserved in botanick Gardens for Variety.

CALABA, Indian Mastick-tree.

The Characters are;

It hath a roseaceous Flower, consisting of several Petals, which are placed in a circular Order, from whose Flower-cup rises the Pointal, which afterwards becomes a spherical fleshy Fruit, including a Nut of the same Form.

We know but one Sort of this Plant, which is,

- CALABA folio citrii splendente. Plum. N. G.*
39. Indian Mastick-tree, with a shining Citron Leaf.

This Tree grows to a great Magnitude in the warm Parts of America, where it is a Native: From the Trunk and Branches there issues out a clear Gum, somewhat like Mastick, from whence it received its Name, the Gum being us'd in those Countries as Mastick.

At present this Tree is pretty rare in England, it being so tender as not to bear the open Air; so that it must be preserv'd in Stoves, with the most tender Exotick Plants; it is propagated by the Nuts, which are frequently brought from America; these should be planted in small Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Pots frequently, to forward the Vegetation of the Nuts, which having hard Shells, are pretty long before they break their Covers, unless they have a good Share of Heat and Moisture. When the Plants are come up about two Inches high, they should be carefully transplanted, each into a separate small Pot filled with light fresh Earth, and plung'd into

a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root, after which time they should have Air admitted to them in proportion to the Heat of the Weather and the Bed in which they are placed, and they must be frequently watered in warm Weather; in this Bed they may remain during the Summer Season, but at Michaelmas they should be remov'd into the Bark-stove, and plac'd in a warm Situation; during the Winter Season these Plants will require Water pretty often, but it should not be given to them in large Quantities, especially in cold Weather, lest it rot the Fibres of their Roots.

The Spring following the Plants should be shaken out of the small Pots, in which they were placed, and transplanted into Pots of a larger Size, observing to pare off all the decay'd Fibres, and fill the Pots with the above-mention'd fresh Earth, and plunge them into the Hot-bed again, observing to water them more frequently, and give them a greater Share, as the Weather increases warm: The other Management of these Plants being the same as hath been directed for the Coffee-tree and some other tender Exotick Trees, it need not be repeated.

CALCEOLUS, Ladies Slipper.

The Characters are;

It hath an anomalous Flower, consisting of six dissimilar Leaves, four of which are placed in the Form of a Cross; the other two possess the Middle, one of which is bifid, and rests upon the other, which is swelling, and shaped like a Shoe: The Empalement becomes a Fruit, open on three Sides, to which adhere the Valves, pregnant with very small Seeds like Dust.

The Species are;

1. *CALCEOLUS Marianus. Dod.* Ladies Slipper.
2. *CALCEOLUS flore majore. Tourn.* Ladies Slipper, with a larger Flower.
3. *CALCEOLUS Marianus Canadensis. Cornut.* Canady Ladies Slipper.
4. *CALCEOLUS Mariæ luteus. Mor. H. R. B.* The yellow Ladies Slipper.

The first Species grows wild in the North of England, and in Scotland; from whence the Plants may be procured. The best Season for transplanting of them is in Autumn, just as the Leaves decay; when the Roots should be carefully taken up with a large Ball of Earth to them, and must be planted in a strong loamy Soil, and in a shady Situation; where if they are suffered to remain undisturbed, they will produce their beautiful Flowers in May; and may be preserved several Years: But if they are placed in a warm, rich Soil, they will not thrive, and rarely produce any Flowers.

The second Sort is not a Native of England, but is equally hardy with ours; so that if Roots can be procured from abroad, they must be treated in the same manner as hath been directed for that.

The third Sort is found in New-England, Virginia, and North-Carolina, in moist Woods, from whence the Roots may be procured.

These

These must have a moist, shady Situation, and in Winter should be screened from severe Frosts, otherwise they cannot be preserv'd in this Country: For although they are found wild in Countries where they have much colder Winters, yet growing in the Woods, they are covered with Leaves, and are protected by the Trees; so that the Frost doth not penetrate very deep into the Earth.

All these Plants should be placed in a shady Situation, and in dry Weather must be frequently water'd, otherwise they will not thrive, for they generally grow on moist springy Soils, and where they are shaded with Trees; so that where there is not particular Care to keep them moist during their Season of Growth, they seldom thrive in Gardens.

CAMARA, *American Viburnum, vulgo.*

The Characters are;

It hath an anomalous personated Flower, consisting of one Leaf, whose upper Lip (or Crest) is erect, but the Beard (or under Lip) is divided into three Parts. The Embryo upon which the Flower sits, afterward becomes a soft Fruit or Berry, inclosing a hard, round Seed; to which may be added, that many Embryo's are collected into one Body.

The Species are;

1. CAMARA *spinosa, flore variegato.* Plum. Nov. Gen. *American Viburnum*, with a variegated Flower.

2. CAMARA *trifolia, purpurascens flore.* Plum. Nov. Gen. *American Viburnum*, with three Leaves and a purplish Flower.

3. CAMARA *salviae foliis, floribus incarnatis.* *American Viburnum*, with Sage Leaves, and flesh-colour'd Flowers.

4. CAMARA *melissae folio, flore variabili.* Hort. Elth. *American Viburnum*, with a Balm Leaf, and a variable Flower.

These Plants are Natives of *America*, where there are several other Species than are here enumerated. They may be raised from Seeds, which may be obtain'd from *Jamaica*, *Barbadoes*, or any of the warm Islands in the *West-Indies*; where they are known by the Name of *Wild Sage*. These Seeds should be sown in *February* or *March*, in small Pots filled with light rich Earth, which should be plunged into a Hot-bed of Tanners-bark, observing to refresh the Earth often with Water; and in the Heat of the Day the Glasses should be raised to admit the Air to the Pots, otherwise the Bed will be so hot as to endanger the scalding of the Seeds. In about five or six Weeks after the Seeds are sown, the Plants will begin to appear; when you must be careful to refresh them often with Water, as also to give them Air, in proportion to the Warmth of the Bed in which they are placed; and so soon as the Plants are two Inches high, they should be taken carefully out of the Pots in which they were sown, and transplanted, each into a separate small Pot filled with fresh light Earth, and plunged again into the Hot-bed: But you must observe to stir up the Bark with a Dung-fork, that it may renew its Heat; and when the Pots are plunged, you must water them pretty well, to

settle the Earth to the Plants, which must be repeated often: You must also shade the Glasses until the Plants have taken new Root; after which time they should have Air and Water, in proportion to the Heat of the Season, and the Bed in which they are plac'd.

By the middle or latter End of *June* the Plants will have acquired Strength, and the Roots will fill the small Pots into which they were planted; therefore you should shake them out of those, and put them into Pots of a larger Size, which should be again plunged into the Hot-bed, to encourage the Plants to take Root; after which time they should be enured by Degrees to the open Air, into which they should be removed in the middle of *July*, placing them in a warm Situation, where they may be defended from strong Winds; and toward the End of the Month they will begin to shew their Flowers, which are produc'd in Clusters at the Extremity of the Branches, and will continue in Beauty for near three Months.

Toward the End of *September* these Plants must be removed into the Stove, observing to place them where they may enjoy free Air, and have the Benefit of the Sun, as also to refresh them often with Water; but in the Depth of Winter you must not give them too much at one time: You must also keep them clear from dead Leaves, or decayed Branches; which, if suffered to remain, are often injurious to the Plants.

These Plants must remain in the Stove until *June*; for if they are carried abroad too soon, they are often injur'd by the cold Nights, which frequently happen in *May*. But you should let them have as much Air as possible in the Spring, when the Weather is mild, otherwise the Shoots will be weak, and when the Plants are exposed they generally decay, whereby their Flowers are destroyed. When they are removed out of the Stove, they should be placed in a warm Situation, and must be frequently watered; which will cause them to produce much stronger Flowers, and in greater Plenty than otherwise they would. With this Management the Plants will grow to the Height of five or six Feet, and may be trained to have regular Heads, and in warm Seasons will often produce ripe Seeds in *England*.

They may also be propagated from Cuttings, which should be taken from the old Plants in *April*, and must be planted into Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which time they must be treated in the manner directed for the seedling Plants.

CAMPANULA, Bell-flower.

The Species omitted in the former Volume are;

15. CAMPANULA *arvensis procumbens.* Inst. R. H. *Venus's Looking-glass, vulgo.*

16. CAMPANULA *arvensis erecta.* H. L. Upright *Venus's Looking-glass.*

17. CAMPANULA *arvensis erecta, flore albo.* Inst. R. H. Upright *Venus's Looking-glass*, with a white Flower.

18. CAM-

18. *CAMPANULA arvensis procumbens*, flore albo. H. L. Venus's Looking-glass, with a white Flower.

19. *CAMPANULA maxima, foliis latissimis, flore caeruleo*. C. B. P. Greatest Bell-flower, with broad Leaves, and a blue Flower, commonly called Giant Throatwort.

20. *CAMPANULA maxima, foliis latissimis, flore albo*. C. B. P. Greatest Bell-flower, with broad Leaves, and a white Flower.

21. *CAMPANULA pratensis, flore conglomerato*. C. B. P. Little Throatwort, or Canterbury Bells, vulgo.

22. *CAMPANULA pratensis, flore conglomerato albo*. H. R. Par. Little Throatwort, or Canterbury Bells, with a white Flower.

23. *CAMPANULA foliis echii, floribus villosis*. C. B. Bell-flower with Leaves like Vipersbugloss, and hairy Flowers.

24. *CAMPANULA foliis ancbusæ, floribus oblongis*. C. B. Bell-flower with Leaves like Alkanet, and longish Flowers.

25. *CAMPANULA nemorosa angustifolia, magno flore, major*. Inst. R. H. Greater wood Bell-flower, with a narrow Leaf, and large Flower.

26. *CAMPANULA nemorosa angustifolia, parvo flore*. Inst. R. H. Narrow-leaved wood Bell-flower, with a small Flower.

27. *CAMPANULA minor rotundifolia vulgaris*. C. B. Common small round-leaved Bell-flower.

28. *CAMPANULA pentagonia perfoliata*. Mor. Hist. Five-corner'd Bell-flower, with a perfoliated Leaf.

The four first Sorts of Venus's Looking-glass are annual Plants; the Seeds of these should be sown in the Borders of the Flower-garden, where they are to remain; for they do not love transplanting. If the Seeds are sown in April, the Plants will flower in June and July; but if they are sown in May, they will not flower till August: so that by sowing them at different Times, there may be a Succession of them in Flower during all the Summer Months; and if the Seeds are sown toward the End of August, upon a light warm Soil, the Plants will abide the Winter, and flower early the Spring following. The Seeds of the first Sort are very common in all the Seed-shops in London: the fourth is a Variety of the first; but the second and third Sorts are less common in England.

All the other Sorts (except the last) are very hardy Plants, which abide many Years, and will grow in shady Places under the Drip of Trees; so that they are very proper to plant in Wilderness Quarters, where they will thrive, and produce their Flowers every Year; so will afford an agreeable Variety in such Parts of the Garden, where few other Plants will thrive.

They may be propagated by sowing of their Seeds on a Bed of fresh Earth in the Spring; and when the Plants are come up, they should be transplanted into Beds in the Flower-nursery, observing to water them, until they have taken new Root; after which time they will require no farther Care, but to keep them clear from Weeds. At Michaelmas they may be transplanted into the Places where they are designed to remain; where they will continue many

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Years, and will increase by their Roots, by which Method they may also be propagated.

The last Sort is an annual Plant, which may be propagated in the same manner as the Venus's Looking-glass; but being a larger Plant, should be allowed more Room to grow. If the Seeds of this Plant are permitted to fall on the Ground, the Plants will come up the following Spring, and thrive without any other Culture but keeping them clear from Weeds.

CAMPHORATA, Stinking Ground-pine.

The Species are;

1. *CAMPHORATA hirsuta*. C. B. Hairy stinking Ground-pine.

2. *CAMPHORATA glabra*. C. B. Smooth stinking Ground-pine.

These Plants grow plentifully on sandy and rocky Soils near Montpelier, as also in Italy and Spain; but are seldom cultivated in Gardens.

The first Sort is reckoned amongst the officinal Plants in the College Dispensatory; but at present is seldom used in Medicine.

They may be propagated by Slips, which should be planted in a shady Border in April, just as the Plants begin to shoot, observing to water them frequently; and when the Slips have taken good Root, they may be transplanted (with a Ball of Earth to their Roots) into a warm dry Border, or else into Pots, that they may be sheltered in severe Frosts, otherwise they will be destroyed.

They may also be propagated by Seed; but as they seldom perfect their Seeds in this Country, so the other Method is always used to propagate them here.

CANNABINA, Bastard-hemp.

The Characters are;

It is a Genus, whose Flowers have no Petals; but consist of a Number of Threads, and are barren: for the Seed is produced on Female Plants, which have no visible Flower; but have membranaceous Seed-vessels, which inclose triangular Seeds, which are for the most part oblong.

The Species are;

1. *CANNABINA Cretica fructifera*. Tourn. Cor. Fruitful Bastard-hemp of Candy.

2. *CANNABINA Cretica florifera*. Tourn. Cor. Male Bastard-hemp of Candy.

These two Plants both arise from the same Seeds (as is the Case with the Male and Female Plants of the common Hemp). They are Natives of the Archipelago, from whence Dr. Tournefort sent the Seeds to the Royal Garden at Paris. They are hardy Plants, which may be propagated by sowing their Seeds on a Bed of light fresh Earth in the Spring; and when the Plants are come up two Inches high, they should be carefully transplanted into a Bed of fresh Earth, observing to shade and water them, until they have taken new Root; after which time they will require no farther Culture, but to keep them clear from Weeds. At Michaelmas the Plants will die down to their Roots; so they should remain in these Beds until the Beginning of March, at which time they should be transplanted out where they are to remain; where they should be placed at a good Distance from

from each other, or any other Plants; for they grow pretty large, and will form large Heads, if they are suffered to remain many Years; so that they should be planted at least three Feet asunder.

In the native Places of their Growth they often rise to the Height of ten or twelve Feet; but in *England* they seldom grow to more than half that Size: but when their Roots are very strong, they will send forth six or eight Stems from each Root, so that they will occupy a large Space of Ground; but as there is no great Beauty in these Plants, so there should be but few of them admitted for Variety.

CAPPARIS, the Caper-tree.

The Species omitted in the former Volume are;

2. *CAPPARIS spinosa, fructu minore, folio rotundo.* C. B. P. Prickly round-leaved Caper, with a small Fruit.

3. *CAPPARIS folio acuto.* C. B. P. Sharp-leaved Caper.

4. *CAPPARIS Americana arborescens, lauri folio, fructu longissimo.* Plum. Cat. American Tree-caper, with a Bay-leaf, and a long Fruit.

5. *CAPPARIS alia arborescens, lauri foliis, fructu oblongo ovato.* Plum. Cat. American Tree-caper, with a Bay-leaf, and an oval Fruit.

6. *CAPPARIS Americana arborescens, lauro-cerasi foliis, fructu oblongo.* American Tree-caper, with Laurel-leaves, and an oblong Fruit.

The first, second, and third Sorts are common in the South of France, and in Italy, where they grow wild on the Walls, and old Ruins. At *Toulon* they cultivate these Plants upon the Walls, by sowing of their Seeds in the Holes of the stone Walls, about three or four Feet from the Ground; so that the Roots of the Plants penetrate into the Joints of the Walls, and from thence draw their Nourishment. In *England* it is very difficult to preserve these Plants, especially if they are planted in Earth; for these Plants thrive much better in Rubbish: so that where any Person is desirous to cultivate them, they should be planted in Pots filled with Lime-rubbish and Sand, and placed into a moderate Hot-bed, to forward their making new Roots; after which time they may be exposed in the open Air in Summer; but in Winter they must be sheltered from severe Frost, which will destroy them. The Stump of these Plants are generally brought over in Plenty from Italy every Year, by the Persons who bring over Orange-trees and *Jasmines*; so that they may be purchased from them at a moderate Price, which is far the easiest Method of being furnished with these Plants; for the Seeds are not easily obtained from abroad, nor do they succeed very well with us. Altho' these Plants require Shelter, when planted in Pots; yet they will endure the severest Cold of our Winters, if growing in a Wall.

The fourth, fifth and sixth Sorts, are Natives of *America*: the fourth and fifth were discovered by Father *Plumier* in the French Islands; but the sixth was found by Mr. Robert Millar, near *Carthagena* in the Spanish West-Indies, from whence he also sent me the other two Kinds.

These three Sorts may be propagated by Seeds, which should be sown in Pots filled with light sandy Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth frequently, to forward the Vegetation of the Seed. When the Plants are come up, they should be each transplanted into a small Pot filled with light sandy Earth, and plunged into the Hot-bed again, observing to screen them from the Sun, until they have taken Root; after which time they must have Air and Water, in proportion to the Warmth of the Season. When the Plants have filled these small Pots with their Roots, they should be carefully taken out, and their Roots trimmed, and put into larger Pots, and plunged into the Hot-bed again. In Winter these Plants must be removed into the Stove, and placed in the Bark-bed, where they should be treated after the manner directed for the *Guajava*; with which Management these Plants will succeed.

CARDAMINE, Ladies-smock.

The Species omitted in the former Volume are;

4. *CARDAMINE impatiens, vulgo Sium minus.* Ger. Emac. Impatient Ladies-smock.

5. *CARDAMINE impatiens altera hirsutior.* Raii Syn. The other rough impatient Ladies-smock.

6. *CARDAMINE flore majore, elatior.* Tourn. Taller Ladies-smock, with a larger Flower.

7. *CARDAMINE Sicula, foliis fumarie.* Tourn. Sicilian Ladies-smock, with Fumitory-leaves.

8. *CARDAMINE montana, asarifolio.* Tourn. Mountain Ladies-smock, with an Asarabacca-leaf.

9. *CARDAMINE Alpina minor, resedæ folio.* Tourn. Small Ladies-smock of the Alps, with a base wild Rocket-leaf.

10. *CARDAMINE hirsuta, chelidonii folio, flore purpurascens.* Tourn. Hairy Ladies-smock, with a Celandine-leaf, and purplish Flower.

11. *CARDAMINE glabra, chelidonii folio.* Tourn. Smooth Ladies-smock, with a Celandine-leaf.

12. *CARDAMINE Alpina primatrisfolia.* Clus. The first three-leaved Ladies-smock of the Alps.

13. *CARDAMINE Græca, chelidonii folio rarius & profundius inciso, flore albo.* Tourn. Cor. Greek Ladies-smock, with a Celandine-leaf, that has but few and deep Jags, and a white Flower.

The fourth and fifth Sorts grow wild in *England*; but are sometimes allowed a Place in Gardens for Variety-sake. When the Seeds of these Plants are ripe, the Pods burst on the first Touch, and scatter the Seeds all around. If these Plants are put in a shady Border, and permitted to shed their Seeds, they will maintain themselves without any Care.

The sixth Sort grows in marshy Places, and in standing Waters; so is rarely kept in Gardens.

The seventh Sort is not a Native of *England*, yet will endure the severest Cold of this Climate in a warm Border; where, if it is permitted to shed

shed its Seeds, it will maintain its Place without any farther Care.

The other Sorts are Natives of the *Alpes* and *Pyrenean* Mountains (except the last, which was discovered by Dr. *Tournefort* in *Greece*). They are all extremely hardy: their Seeds should be sown soon after they are ripe, in a moist shady Situation, where the Plants will soon appear, and will require no other Care, but to clear them from Weeds; and if their Seeds are permitted to scatter, the Plants will come up better, than if sown. These Varieties are preserved in botanic Gardens, and some of them merit a Place in some shady Part of every curious Garden, for their odd manner of casting forth their Seeds on the slightest Touch, when the Pods are ripe; which often surprises Strangers, who attempt to gather the Seeds.

CARDIACA, Motherwort.

The Species are;

1. CARDIACA. *J. B.* 3. 320. Common Motherwort.

2. CARDIACA flore albo. *Tourn.* Motherwort with a white Flower.

3. CARDIACA crispa. *Raii Hist.* Curled Motherwort.

These Plants are preserved in botanic Gardens for the sake of Variety. The first is often found wild in *England*; but it is only near Gardens, from whence it was ejected. The second is a Variety of the first, from which it only differs in the Colour of the Flower. The third Sort differs from the two former, in having fine curled Leaves.

All these are very hardy Plants, which will sow themselves where-ever they are introduced, so as to become Weeds in the Place. The Seeds of these Plants may be sown the Beginning of *March*, on almost any Soil, or in any Situation; where the Plants will come up in *April*, and, if kept clear from Weeds, will thrive exceedingly. When they are large enough to transplant, they should be removed, and planted eighteen Inches or two Feet asunder, because they will grow pretty large. If the Weather should prove dry, when they are transplanted, they should be watered, until they have taken new Root; after which time they will require no farther Care, than to keep them clear from Weeds; and the second Year they will flower, and produce ripe Seeds. The first Sort, being a medicinal Plant, is pretty much cultivated in the Physic-gardens near *London*, from whence the Markets are supplied with the Herb. The other two Sorts are only preserved in botanic Gardens for the sake of Variety.

CARDUUS, Thistle.

The Species omitted in the former Volume are;

4. CARDUUS galactites. *J. B.* 3. 54. The milky Thistle.

5. CARDUUS humilis alatus, five Carduus Mariae, annuus, folio lituris obscuris notato. *H. Catb.* Dwarf annual Ladies-thistle, with winged Stalks, and dark spotted Leaves.

6. CARDUUS tomentosus, acanthi folio, vulgaris. *Tourn.* Common cotton Thistle.

7. CARDUUS stellatus, five Calcitrapa. *J. B.* Common Star-thistle.

8. CARDUUS stellatus, five Calcitrapa, flore albo. *H. R. Par.* Star-thistle with a white Flower.

9. CARDUUS, seu Polyacantha vulgaris. *Tourn.* The supposed true Fish-thistle.

10. CARDUUS Creticus tomentosus, acanthi folio, flore magno purpurascens. *Tourn. Cor.* Woolly Thistle of Candy, with an Acanthus Leaf, and a large purplish Flower.

The fourth Sort grows in *Spain*, *Italy*, and the *South* of *France*; but will not endure the Cold of our Winters, unless in a dry Soil, and a warm Situation.

The fifth Sort is a Native of *Sicily*; but if once planted in a Garden, and suffered to shed its Seed, will maintain its Place.

The sixth Sort is very common upon the Sides of dry Banks, and other uncultivated Places in diverse Parts of *England*. Of this Kind there are a great Variety in *France*, *Spain*, *Italy*, and other warm Countries: many of which have been introduced into the botanic Gardens for the sake of Variety; but are not allowed a Place in any other Gardens.

The seventh Sort is found on Dunghills, and the Sides of Banks in several Parts of *England*. This Plant is greatly used in *France*, as a medicinal Herb; and is judged febrifugous, vulnerary, and aperitive: of late Years it has been introduced amongst the medicinal Plants in *England*; but the Virtues are not so generally known, as in *France*, where it has been long in Use.

All these Plants delight to grow on barren uncultivated Places; so whoever hath a mind to cultivate any of the Species, should sow their Seeds on a Bed of light undunged Earth in the Spring of the Year, where they are designed to remain; for they do not thrive so well, when they are transplanted. When the Plants are come up, they should be thinned, so as to leave them eighteen Inches or two Feet asunder; and if they are kept clear from Weeds, it is all the Culture which they will require. The second Year they will flower in *June* and *July*, and in *August* they will perfect their Seeds, and the Roots will soon after decay; so that to have a Succession of these Plants, their Seeds must be sown every Year.

The ninth Sort is somewhat tenderer than the others; so should have a warmer Situation; otherwise it will be destroyed, if the Winter should prove severe. This doth not spread so much as the other Kinds; but will grow upright to the Height of four or five Feet; and having Leaves regularly placed on the Stalks, from the Ground to their Heads, makes an agreeable Appearance, and merits a Place in a Garden, for the sake of Variety.

CARLINA, The Carline Thistle.

The Characters are;

It hath for the most part a radiated Flower, from whose Disk arise many Florets, which rest upon the Embryo's; but the plain Petals, which arise from the Crown, have no Embryo's fixed to them: the Flower-cup is large and prickly, inclosing

closing the Embryo's. These Embryo's afterward become Seeds, which have a Down adhering to them, and each is separated by an imbricated Leaf.

The Species are ;

1. *CARLINA acaulos, magno flore albo.* C. B. Carline Thistle without Stalks, and a large white Flower.

2. *CARLINA acaulos, magno flore purpureo.* C. B. Carline Thistle without Stalks, and a large purple Flower.

3. *CARLINA sylvestris vulgaris.* Clus. Common wild Carline Thistle.

4. *CARLINA acaulos, flore magno, radice perenni, Montis Aurei.* H. R. Par. Perennial Carline Thistle without Stalks, of Mount d'Or.

5. *CARLINA acaulos gummifera.* C. B. P. Gum-bearing Carline Thistle without Stalks, commonly called the white Chameleon.

6. *CARLINA caulescens, magno flore albicante.* C. B. P. Stalky Carline Thistle, with a large whitish Flower.

7. *CARLINA caulescens, magno flore rubente.* C. B. P. Stalky Carline Thistle, with a large reddish Flower.

8. *CARLINA polycephalus alba.* C. B. P. Many-headed white Carline Thistle.

9. *CARLINA sylvestris, flore aureo, perennis.* H. L. Wild perennial Carline Thistle, with a golden Flower.

10. *CARLINA sylvestris minor Hispanica.* Clus. H. Lesser wild Spanish Carline Thistle.

11. *CARLINA patula, atractylidis folio & facie.* Tourn. Low spreading Carline Thistle, with a Leaf and the Face of Distaff Thistle.

12. *CARLINA umbellata Apula.* Tourn. Umbellated Carline Thistle of Apulia.

These Plants grow in the South of France, in Spain, and in Italy: the third Sort grows wild in England, upon chalky Hills, and on uncultivated Places.

All these Plants are preserved by the Curious in Botany, for the sake of Variety ; but they are seldom introduced into other Gardens, as they are Plants of no great Beauty, nor are they of any Use, (except the fifth Sort, which is placed in the Catalogue of Simples annexed to the College Dispensatory, but is rarely ordered in Medicine) so far as I could ever discover : yet, as they are sometimes cultivated by curious Persons, so it was thought proper to enumerate their several Varieties.

They may all be propagated by sowing of their Seeds in the Spring on a Bed of fresh undunged Earth, where they are designed to remain ; for, as they send forth tap Roots, so they will not bear transplanting so well as most other Plants. When the Plants appear above-ground, they should be carefully weeded ; and, as they grow in Size, so they should be thinned, where they are too close, leaving them about ten Inches or a Foot asunder. The second Year most of these Plants will flower : but, unless the Summer proves dry, they rarely produce good Seeds in England ; and as most of them decay soon after they have flowered, so it is pretty difficult to maintain these Plants in this Country.

CASIA, Red-berried Shrub-casia.

The Characters are ;

It is Male and Female in different Plants: the Male hath Flowers consisting of many Stamina or Threads, without any Petals ; these are always sterile: the Female Plants, which have no conspicuous Flower, produce spherical Berries, in which are included Nuts of the same Form.

The Species are ;

1. *CASIA poetica Monspelienfium, an Theophrasti.* Lob. Icon. 433. Montpellier Casia of the Poets, according to Lobelius.

2. *CASIA Hispanica procerior, myrti folio.* Tourn. Spanish Casia, with a Myrtle Leaf.

The first of these Plants grows in Plenty by the Road-side in Spain, and the South of France ; where it rises to the Height of three Feet, and becomes shrubby. This was supposed by Lobel to be the Casia of the Poets: but it doth not well agree with the Descriptions we have of Casia ; by which it should be a sweet Herb, and proper to be wrought into Garlands ; the Leaves should also be inclining to White ; in neither of which this Plant doth agree. There are some Authors, who suppose the Casia to be the *Thymelaea lini folio* of Caspar Bauhin : but it is very uncertain what Plant it was, which Virgil, in his *Georgics*, mentions under that Name ; since the Epithets applied by him to the Casia, will not agree with any Plant we at present are acquainted with.

The second Sort was discovered by Dr. Tournefort in his Travels thro' Spain: this grows taller than the former Sort, and hath much broader Leaves.

Both these Plants may be propagated by Seeds, which should be sown in Pots or Boxes filled with fresh Earth: the Seeds should be covered about half an Inch thick with the same Earth. If they are sown in the Autumn soon after they are ripe, and the Pots or Boxes placed under a Hot-bed Frame, where they may be sheltered from hard Frosts, the Plants will come up the following Spring: but if they are kept till the Spring before they are sown, the Seeds will remain in the Ground a whole Year before the Plants will appear ; in which Case you should place the Pots or Boxes in a shady Situation during the Heat of Summer ; but in Winter they must be removed under a Hot-bed Frame, as was before directed.

When the Plants are come up, they should be kept clear from Weeds, and in dry Weather they must be constantly watered ; but they should remain unremoved until the following Spring. The Pots or Boxes should be placed, during the Summer Season, where they may have the Morning Sun till Ten of the Clock, and be screened from the Sun in the Heat of the Day: but in Winter they must be placed under a Hot-bed Frame, to protect them from hard Frosts ; for, while the Plants are so young, they will not endure great Cold. The following Spring, about the Beginning of March, these Plants should be carefully taken up out of the Seed-pots, and each planted in a separate small Pot, filled with fresh Earth, that is not over-strong, observing to water them to settle the Earth to their Roots ; and if you place the Pots on a moderate Hot-bed, it will greatly forward

forward the Plants, and be the most sure Method to preserve them; provided the Bed is not too hot, and you give them a sufficient Quantity of Air. In this Hot-bed the Plants may remain until the Beginning of May, when you should inure them to bear the open Air by degrees; for about the middle of that Month, they must be removed out, and placed where they may have the morning Sun, as was directed before.

The following Winter these Plants should be sheltered under a Hot-bed Frame again: but they must be exposed to the open Air constantly in mild Weather; for they will require only to be protected from severe Cold. In the following Spring some of the Plants may be shaken out of the Pots, (just before they begin to shoot) and planted in the full Ground in a warm Situation; where they will endure the Cold of our ordinary Winters very well, and in a Year or two will produce their Flowers; which are sometimes succeeded by Seeds, but they are seldom ripened in this Country: but as these Plants are liable to be destroyed in very cold Winters, so it will be proper to keep some Plants of each Kind in Pots; which may be sheltered from the Cold, in order to preserve the Species.

CASTOREA.

This Plant was so named by Father Plumier, after a famous Physician and Botanist, whose Name was *Castor Durant*.

The Characters are;

It hath a personated Flower, consisting of one Leaf, whose upper Lip (or Crest) is erect; but the Beard (or under Lip) is divided into three Parts; the middle Part is bifid: the Flower-cup afterward becomes a round fleshy Fruit, inclosing a Shell, in which are contained four angular Seeds.

The Species are;

1. *CASTOREA repens spinosa*. Plum. Prickly creeping Castorea.

2. *CASTOREA racemosa*, flore caeruleo, fructu croceo. Plum. Branching Castorea, with a blue Flower, and a saffron-coloured Fruit.

The first of these Plants hath trailing Branches, which will creep on the Ground, if they are not supported; for in the Places where it grows wild, it rambles over whatever Plants grow near it. The Branches are closely beset with Spines, somewhat like the common Bramble, so that it renders the Places of its Growth very difficult to pass.

The second Sort grows to the Height of ten or twelve Feet, and becomes woody: this sends forth many Branches, at the Extremity of which there are Bunches of blue Flowers of an agreeable Scent; which are succeeded by saffron-coloured Berries, growing in Clusters like Bunches of Currants.

These Plants are Natives of the warmest Parts of America, and were first discovered by Father Plumier, in the French Settlements: but my late learned Friend, Dr. William Houstoun, found them in Jamaica; from whence he sent Samples of both Kinds, with their Seeds, into England, from which some of these Plants were raised.

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They are both propagated by Seeds, which must be procured from the Places where they grow naturally; for they seldom perfect their Seeds in this Country. These must be sown in small Pots filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to water them as often as you find the Earth dry; and in the Heat of the Day, the Glasses of the Hot-bed should be raised, to let the Steam pass off; but if the Nights are cold, the Glasses should be then covered with Mats every Evening, when the Sun is gone off the Bed. In about six Weeks the Plants will begin to appear; when you should carefully clean them from Weeds, and frequently refresh them with Water; and in warm Weather they should have fresh Air admitted to them, that they may get Strength, and not draw up too weak. When the Plants are about two Inches high, they should be carefully taken up, and transplanted each into a separate small Pot filled with fresh light Earth, and plunged into the Hot-bed again: then water them, to settle the Earth to their Roots; and in the Day-time the Glasses should be shaded with Mats, until the Plants have taken Root; after which time they should be constantly watered three or four times a Week, or sometimes oftener, in very hot Weather; and they must have Plenty of Air admitted to them in the Summer Season, otherwise they will draw up weak; but in Winter they must be placed in the Bark-stove, and treated as the Coffee-tree, and such other tender exotic Plants. With this Management they will produce Flowers the second or third Year, and may be continued for several Years, and as they retain their Leaves thro' the Year, so they will add to the Variety in the Stove.

CEIBA, Silk Cotton-tree, vulgo.

The Characters are;

It hath a rosaceous Flower, consisting of several Leaves placed in a circular Order; from whose Calyx arises the Pointal, which afterwards becomes a Fruit shaped like a Bottle, divided into five Parts from the Top to the Bottom; in which are contained several round Seeds wrapped up in a soft Down, and fastened to the five-cornered pyramidal Placenta.

The Species are;

1. *CEIBA viticis foliis, caudice aculeato*. Plum. Nov. Gen. The Silk Cotton-tree, with a thorny Stem.

2. *CEIBA viticis foliis, caudice glabro*. Plum. Nov. Gen. The Silk Cotton-tree, with a smooth Stem.

These two Trees grow very plentifully both in the East and West Indies, where they arrive to a prodigious Magnitude: the Inhabitants of the West Indies hollow the Trunks of these Trees for the making of their Canoes, for which they are chiefly valued. It is reported, that in the Island of Cuba, in Columbus's first Voyage, was seen a Canoe made of a hollowed Trunk of one of these Trees, which was ninety-five Palms long, and capable of containing one hundred and fifty Men. And some modern Writers have affirmed, that there are Trees now growing in the West Indies so large, as scarcely to be fathomed

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thomed by sixteen Men, and so high, that an Arrow can scarcely be shot to their Tops.

The Wool of these Trees is of a dark Colour, and too short to spin; so that it is little valued: but sometimes the Inhabitants stuff Beds and Pillows with it, tho' it is accounted unwholesome to lie upon. The Inhabitants of the *West Indies* call this *Silk-cotton*; but the ancient *American* Name for this Plant being *Ceiba*, Father *Plumier* hath continued it under that Name, and constituted a Genus of it.

These Plants are preserved in some curious Gardens in *Europe*, where they thrive very well, if they are placed in a Bark-stove; but as they are Trees of a large Growth, so it can hardly be expected to see either Fruit or Flowers from them in *England*, since they grow to a great Magnitude, before they produce either in their own Country.

These Plants may be raised from Seeds, which are easily obtained from the *West Indies*; they must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they must be each transplanted into a small Pot, filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them, until they have taken Root; after which they must have free Air let into the Hot-bed, in proportion to the Warmth of the Season; for if the Glasses are kept too close, the Plants will draw up too weak. They must also be frequently refreshed with Water; for they perspire pretty freely, especially in hot Weather. In a Month or five Weeks Time, these small Pots will be filled with the Roots of the Plants: therefore you must shake the Plants out of them; and after having pared off the outside Roots, they must be put into Pots a Size larger, and plunged again into the Hot-bed, observing to manage them as was before directed. When the Plants are grown too tall to remain in the Hot-bed, they must be removed into the Bark-stove; where, during the Summer Season, they should have a large Share of fresh Air; but in Winter they must be kept pretty close: and as the Plants increase in Magnitude, so they should be shifted into larger Pots, that their Roots may have Room to extend. If these Rules be duly observed, the Plants will, in two or three Years, arrive to the Height of ten or twelve Feet, and be proportionably strong; and being placed among other Plants, which require the same Degree of Heat, they add to the Variety.

There are some other Sorts of this Tree in the *Spanish* Settlements in *America*; and I have raised one Sort, which came from *Siam*, whose Leaves resembled those of Marsh-mallow, but the Down and Seeds were exactly the same as of the common Sorts. Those Pods which I received from *Panama*, were of a different Figure from the common Sorts, as was the Down also; for that was in one of a purple Colour, and the other was of a dark Red. The Down of both these Sorts are, by the Inhabitants of those Countries, wrought into Garments, and retain their original Colour, so that they are never dyed.

CELTIS, The Lote or Nettle-tree.

The Species omitted in the former Volume are;

4. *CELTIS orientalis, folio ampliore, magno fructu. T. Cor.* The Eastern Lote or Nettle-tree, with larger Leaves and Fruit.

5. *CELTIS orientalis minor, foliis minoribus & crassioribus, fructu flavo. T. Cor.* Smaller Lote or Nettle-tree, with smaller and thicker Leaves, and yellow Fruit.

6. *CELTIS Americana, folio citri subtus aureo, fructu rubro. Plum.* American Lote or Nettle-tree, with a Citron-leaf, and a red Fruit.

The fourth and fifth Sorts were discovered by Dr. *Tournefort* in his Travels, who sent their Fruits to the Royal Garden at *Paris*; where they were raised, and have since been distributed to many curious Gardens in *Europe*. These two Sorts are as hardy as those mentioned in the former Volume, so that they will endure the sharpest Winters in the open Air, especially when they have acquired sufficient Strength; for many of these Trees may suffer by Cold, when they are very young, tho' afterwards they are capable of resisting the severest Cold of this Country.

The fourth Sort will make large Trees, and are proper to range with those of the former Volume; but the fifth never grows very large: this will produce Fruit in a few Years after planting, by which it may easily be propagated; for the Plants will generally come up the first Year, whereas those of the other Sorts seldom appear until the second. These Seeds may be sown in Pots or Boxes filled with light fresh Earth, early in the Spring, and placed where they may have the morning Sun. In dry Weather they must be constantly watered, and they must always be kept clear from Weeds. At *Michaelmas* the Pots should be removed under a South Wall; and if the Winter should prove very severe, it will be proper to screen the Plants with Glasses; otherwise, being very young, they may be destroyed. The following Spring, just before the Plants begin to put out, they should be transplanted either into small Pots, or into a Nursery-bed, observing, if the Spring should prove very dry, to water them constantly, and lay some Mulch about their Roots, to prevent the Sun and Air from penetrating to their Roots; and be careful to clear them from Weeds the following Summer. In this Bed they may remain two Years, in which time they will have acquired Strength enough to be transplanted where they are to remain. The best Season for removing of them is just before they begin to shoot, observing to water them in dry Weather, and lay some Mulch about their Roots, as was before directed. After the Plants are well rooted, they will require no farther Care, but to keep them clear from Weeds, and prevent their being overshadowed with other Trees.

The sixth Sort was discovered by Father *Plumier* in *America*: this is a tender Plant, and will not live out of a Stove in this Country. It may be propagated by Seeds, which must be procured from the *West Indies* (for it hath never

never produced Fruit in Europe): the Seeds should be sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark: these Pots must be constantly watered, and in the middle of the Day, when the Weather is mild, the Glasses of the Hot-bed should be raised to admit fresh Air, and to let the Steam of the Bed pass off. When the Plants are come up about two Inches high, they should be each transplanted into a separate small Pot, filled with light rich Earth, and plunged again into the Hot-bed, observing to shade the Glasses every Day, until the Plants have taken Root; as also to water them duly, as you perceive the Earth to dry. During the Heat of Summer, the Plants must have a large Share of fresh Air every Day; but at Michaelmas they must be removed into the Bark-stove, and managed as the Coffee-trees, and other tender exotic Plants; where they will thrive very well, and having strong shining Leaves, will make an agreeable Variety.

CENTAURIUM MINUS, Lesser Centaury.

To this Article must be added,

I. *CENTAURIUM MINUS maritimum Americanum, amplo flore caeruleo.* Plum. Cat. American sea Lesser Centaury, with a large blue Flower.

The Seeds of this Plant were sent from La Vera Cruz by the late Dr. William Houstoun, who found this Plant in great Plenty upon low swampy Grounds, where the Water stagnated, at a great Distance from the Sea, in the Country about Vera Cruz.

This Plant may be propagated by Seeds, which should be sown early in the Spring on a moderate Hot-bed; and when the Plants are come up, and are strong enough to transplant, they should be each put into a separate small Pot filled with light fresh Earth, and placed into a Hot-bed of Tanners-bark, observing to screen them from the Sun, until they have taken new Root; after which time they must have a large Share of fresh Air in warm Weather, and they should be frequently refreshed with Water. With this Management the Plants will produce their beautiful blue Flowers in Autumn; and, if they are removed into the Bark-stove, may be preserved thro' the Winter; so that the following Year there may be Hopes of their producing ripe Seeds, whereby the Plant may be preserved; for it seldom continues, after it has perfected Seeds.

CHAMÆRHODODENDRON, Sweet Mountain Rose.

The Characters are;

It hath a tubulous Flower consisting of one Leaf, shaped somewhat like a Funnel; from whose Cup arises the Pointal, fixed like a Nail in the hinder Part of the Flower, which afterwards becomes an oblong Fruit, divided into five Cells, in which are contained many very small Seeds.

The Species are;

I. *CHAMÆRHODODENDRON Alpinum glabrum.* Tourn. Smooth Mountain Rose of the Alpes.

2. *CHAMÆRHODODENDRON Alpinum villosum.* Tourn. Hairy Mountain Rose of the Alpes.

3. *CHAMÆRHODODENDRON Alpinum serpyllifolium.* Tourn. Mountain Rose of the Alpes, with a Mother of Thyme Leaf.

4. *CHAMÆRHODODENDRON Indicum, flore amplo coccineo.* Tourn. Indian Mountain Rose, with a large scarlet Flower.

The first, second, and third Sorts grow wild on the Alpes, as also upon several Hills in Germany and Austria; but are with great Difficulty preserved in Gardens in this Country. The best Method to cultivate these Plants is, to put them in Pots filled with fresh loamy Earth, and place them in a shady Situation, observing to water them constantly in dry Weather, otherwise they will soon decay; for in their natural Situation they have frequent Rains, and very great Dews, whereby the Ground is kept continually moist; so that, when these Plants are transplanted into a drier Situation, if they are not duly watered, they are soon destroyed.

They may be propagated by laying down their tender Branches early in the Spring, which, if duly watered, will take Root by the following Spring; when they should be separated from the old Plants, and transplanted, either into Pots filled with fresh loamy Earth, or into some shady moist Border; where, if they are duly watered in dry Weather, they will thrive, and produce their Flowers; but they will not perfect their Seeds in this Country.

The fourth Sort is very tender; therefore must be placed in a warm Stove in the Winter, otherwise it will not live in this Country. This Kind may be propagated by laying down the tender Branches, which will take Root in one Year, provided they are duly watered: then they may be taken off from the old Plant, and each planted into a separate small Pot filled with fresh loamy Earth; and if the Pots are placed in a moderate Hot-bed of Tanners-bark, and the Glasses shaded in the Heat of the Day, until the Plants have taken new Root, it will be a very safe Method to preserve them, and will greatly promote their Growth.

The second Year after these Layers are taken from the old Plants, they will produce Flowers, and continue so to do every Year after. These Plants may be placed abroad in Summer; but they must not be taken out of the Stove till the middle of June, and must be placed where they may be well defended from strong Winds; otherwise they will lose their Leaves in Summer, which will prevent their flowering: nor should they remain abroad too late in Autumn; for if they remain so late as to be pinched by morning Frosts, they seldom survive it; for when the upper Leaves, and tender Shoots are nipped, the Shoots will decay soon after, and the whole Plant be soon destroyed. In Summer these Plants require to be plentifully watered; but in Winter they should not have too large Quantities, but must be frequently refreshed.

CINARA, The Artichoke.

To this Article must be added,

CINARA spinosa, cujus pediculi esitantur. C. B. P. 383. Chardon or Cardoon, vulgo.

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This Plant is propagated by Seeds, which should be sown on an open Bed of light rich Earth the Beginning of *March*; and when the Plants appear above-ground, they should be carefully weeded, and in dry Weather often refreshed with Water. By the Beginning of *May* the Plants will be fit to transplant; when you should prepare some Beds of light rich Earth, into which they should be transplanted, placing them in Rows one Foot asunder, and eight Inches Distance Plant from Plant in the Rows; observing to water them constantly, until they have taken Root; after which time they will require little more than to be kept clear from Weeds. About the middle or latter end of *June*, the Plants will have acquired Strength enough to plant out for good; at which time you must carefully dig a Spot of light rich Ground, into which you should transplant the Plants, placing them in Rows at four Feet Distance every way, observing to water them, until they have taken Root; after which you must keep them very clear from Weeds. In *August* these Plants will be fit to tie up, which must be performed in the following manner; viz. You should first prepare a Parcel of Hay-bands: then, in a dry Day, you must gather up the Leaves regularly, as they were produced; and having taken them up as close as possible without bruising them, you must fasten the Hay-band round them near the Top, so as to keep them up: then with a Spade you must bank up the Earth round the Plants, leaving about ten Inches or a Foot of their Tops uncovered; being careful that the Earth does not get into the Centre of the Plants, which would endanger their rooting. As the Plants advance in Height, so they must be earthed up from time to time, in the same manner as is practised for *Colery*; by which means most of the Earth between the Plants will be raised about them: for if they thrive kindly, they will grow to the Height of three Feet and a half, or four Feet; and will, when taken up for Use, be near three Feet in Length, when trimmed from their outer Leaves. And it is in this their Excellency consists; for it is only the tender blanched Part which is valuable.

Those Plants which were first transplanted out, will be fit for Use the Beginning of *September*; but those which were later transplanted, will not be fit for Use until *October*; and some of them will continue until the End of *November*, or the Middle of *December*, provided the Season be favourable; but in very wet Seasons, or in severe Frosts, they often rot and decay.

In order to save Seeds of this Plant, you should preserve some of the strongest and most vigorous Plants, observing in severe Frosts to cover them lightly with Straw, or Peas-haulm; which should be constantly taken off in mild Weather, otherwise it will endanger the rotting of the Plants. In the Spring the Earth should be taken from the Plants gradually, that the Stems may advance; and in *June* their Heads will be formed much like a small Artichoke, but full of sharp Thorns: in these Heads the Seeds are contained, and will be ripe in *August*.

CLUTIA.

This Plant was named by the learned Dr. Boerhaave of Leyden, in Memory of *Augerius Clute*, who was a curious Botanist.

The Characters are;

It hath a rose-shaped Flower, consisting of five Leaves; in the Centre arises the Pointal, surrounded by five Stamina: this Pointal afterward becomes the Fruit, which is divided into three Parts, and hath three Cells, in which are contained Seeds.

We have but one Species of this Plant, which is;

CLUTIA Æthiopica frutescens, portulacæ folio, flore ex albidovirescente. Boerb. Shrubby Ethiopian Clutia, with a Purslane Leaf, and a greenish white Flower.

This Plant is propagated by Seeds, which should be sown early in the Spring, on a moderate Hot-bed, observing to water the Bed gently from time to time, as the Surface becomes dry; and in the Heat of the Day the Glasses should be raised to admit fresh Air, and let the Steam arising from the Bed to pass off. If the Bed be of a proper Temper for Heat, the Plants will appear in about a Month after sowing; and when they are about two Inches high, they should be carefully taken up, and transplanted each into a separate small Pot filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; after which time they should be frequently refreshed with Water, and the Glasses should be raised every Day, when the Weather is warm, to admit fresh Air; otherwise the Plants will draw up very tall, and become very weak. Toward the latter End of *June*, if the Plants have made a good Progress, they will be near a Foot in Height: therefore you should then begin to inure them to bear the open Air; and the middle of *July*, they may be removed out of the Hot-bed, and placed in the open Air, in a warm Situation, where they may be defended from strong Winds. During the Summer Season, these Plants must be frequently watered; but it should not be given in too large Quantities, especially while the Plants are young. Toward the latter End of *September*, the Plants must be removed into Shelter; for if they are exposed too late in Autumn, they will be in Danger of suffering by morning Frosts. In Winter these Plants should be placed in a moderate Stove for the first Season, while they are young; but after they have obtained Strength, they will live in a good Green-house; but then they should not have too much Water in cold Weather. This Plant will rise to the Height of three or four Feet, and become shrubby; and being an Ever-green, will add to the Variety in the Green-house.

COA. This Plant was so named by Father Plumier from the Island of *Cous*, which gave Birth to the Prince of Physicians *Hippocrates*. We have no English Name for this Plant.

The Characters are;

It hath a globular bell-shaped Flower, consisting of one Leaf; from whose Cup arises a multifid Pointal.

Pointal, fixed like a Nail in the binder Part of the Flower; which afterward becomes a Fruit, composed of three membranaceous Seed-vessels, which are compressed, bivalve, and divided into two Cells, in which are contained oblong winged Seeds.

We have but one Species of this Plant, which is;

Coa scandens, fructu trigemino subrotundo. Plum. Climbing Coa, with a roundish Fruit, which opens into three Parts.

This Plant was observed by Father Plumier, (in the French Islands in America) and hath been since found in great Plenty in the Spanish Settlements in America, particularly about Campechy, from whence the Seeds have been sent by Mr. Robert Millar, Surgeon, to some curious Persons in this Country, who have raised several of the Plants; but as they are very young, so it can't be expected that any of them will produce Flowers until they are three or four Years old, because they seem to be of slow Growth.

This Plant is propagated by Seeds, which must be obtained from the Places where it naturally grows, which should be sown early in the Spring, in small Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth as often as it becomes dry; and in the Heat of the Day, the Glasses of the Hot-bed should be raised to admit fresh Air, and let the Steam, which may arise from the Bed, pass off; and if the Nights should prove cold, the Glasses should be covered with Mats. If this be duly observed, the Plants will begin to appear in three Weeks or a Month after sowing; when you should be careful to sprinkle them frequently with Water, but do not let them have too much at each time; for while they are very young, they will be in danger of rotting, if they are kept too moist. You must also observe to admit fresh Air to them, in proportion to the Warmth of the Season, otherwise they will draw up very weak; which should always be carefully prevented, because few Plants which are drawn up tender at first, will ever after become so strong and beautiful as those which are brought up hardily from the Beginning.

When the Plants are about two Inches high, they should be carefully transplanted each into a separate Pot, filled with light fresh Earth, and plunged into the Hot-bed again, observing to shade the Glasses every Day when the Sun is warm, until the Plants have taken new Root; after which time they should be raised every Day to admit fresh Air to the Plants, in Proportion to the Warmth of the Season. During the Summer Season, these Plants must be frequently refreshed with Water; and when their Roots have filled the Pots in which they were first planted, they should be shaken out of them, and their Roots pared round, and then put into Pots a little larger than the former, which must be filled with light fresh rich Earth, and then plunged again into the Hot-bed; for these Plants will not live in the open Air in this Country: so that when they are grown too large to remain under the Glasses

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of the Hot-bed, they should be removed into the Bark Stove, where they should be placed with the tenderest Exoticks, and heated with great Care. This Plant commonly rises to the Height of five or six Feet, but being a trailing Plant must be supported by a Stake; otherwise it will trail on the neighbouring Plants in the Stove, and injure them. It is ever-green, and the Leaves being of a shining green Colour, it makes a pretty Variety amongst other tender exotic Plants.

CONOCARPODENDRON, Silver Tree, *vulgo.*

The Characters are;

It hath an apetalous staminate Flower, which is surrounded by a Number of long Leaves, immediately under the Flower-cup, which consists of five narrow Leaves; these are succeeded by Cones, in Shape like those of the Larch Tree; the Seeds are each of them included in a separate Cell.

The Species are;

1. CONOCARPODENDRON *foliis argenteis sericeis latissimis.* Boerb. Ind. alt. Silver Tree with broad soft white Leaves.

2. CONOCARPODENDRON *folio rigido crasso angusto, cono laricis parvo.* Boerb. Ind. alt. Silver Tree with a narrow thick stiff Leaf, and a small Cone.

3. CONOCARPODENDRON *folio subrotundo crasso rigido valde nervoso, cono longo variegato, ex rubro & flavo, flore aureo.* Boerb. Ind. alt. Silver Tree with a roundish thick stiff Leaf full of Nerves, long Cones variegated with Red and Yellow, and a gold-coloured Flower.

4. CONOCARPODENDRON *folio tenui angusto saligno, cono caliculato, corona foliacea succincto.* Boerb. Ind. alt. Silver Tree with a narrow Willow Leaf, and the Cones growing in small Cups, which are surrounded with a Crown of Leaves.

These Plants are at present very rare in the European Gardens; the natural Place of their Growth is in the Country of the Hottentots, near the Cape of Good Hope, from whence several of these Kinds have been brought to the Gardens in Holland; but I have not observed more than two Sorts in the English Gardens: for they are with Difficulty propagated, the Cuttings seldom taking Root, tho' managed with the greatest Care, and the Layers are two or three Years before they are rooted enough to take off; so that the surest Method to propagate these Plants is by Seeds, which are seldom brought from the Country of their Growth; and as they do not yet produce Seeds in Europe, so they will be scarce, unless a Quantity of their Seeds could be procured from abroad.

The Seeds should be brought over in their Cones; for if they are taken out, they will lose their growing Quality, before they arrive in Europe. When the Seeds are obtained, they should be sown early in the Spring of the Year, in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing frequently to water the Earth, otherwise the

This Plant is propagated by Seeds, which should be sown on an open Bed of light rich Earth the Beginning of *March*; and when the Plants appear above-ground, they should be carefully weeded, and in dry Weather often refreshed with Water. By the Beginning of *May* the Plants will be fit to transplant; when you should prepare some Beds of light rich Earth, into which they should be transplanted, placing them in Rows one Foot asunder, and eight Inches Distance Plant from Plant in the Rows; observing to water them constantly, until they have taken Root; after which time they will require little more than to be kept clear from Weeds. About the middle or latter end of *June*, the Plants will have acquired Strength enough to plant out for good; at which time you must carefully dig a Spot of light rich Ground, into which you should transplant the Plants, placing them in Rows at four Feet Distance every way, observing to water them, until they have taken Root; after which you must keep them very clear from Weeds. In *August* these Plants will be fit to tie up, which must be performed in the following manner; viz. You should first prepare a Parcel of Haybands: then, in a dry Day, you must gather up the Leaves regularly, as they were produced; and having taken them up as close as possible without bruising them; you must fasten the Hay-band round them near the Top, so as to keep them up: then with a Spade you must bank up the Earth round the Plants, leaving about ten Inches or a Foot of their Tops uncovered; being careful that the Earth does not get into the Centre of the Plants, which would endanger their rooting. As the Plants advance in Height, so they must be earthed up from time to time, in the same manner as is practised for *Colery*; by which means most of the Earth between the Plants will be raised about them: for if they thrive kindly, they will grow to the Height of three Feet and a half, or four Feet; and will, when taken up for Use, be near three Feet in Length, when trimmed from their outer Leaves. And it is in this their Excellency consists; for it is only the tender blanched Part which is valuable.

Those Plants which were first transplanted out, will be fit for Use the Beginning of *September*; but those which were later transplanted, will not be fit for Use until *October*; and some of them will continue until the End of *November*, or the Middle of *December*, provided the Season be favourable; but in very wet Seasons, or in severe Frosts, they often rot and decay.

In order to save Seeds of this Plant, you should preserve some of the strongest and most vigorous Plants, observing in severe Frosts to cover them lightly with Straw, or Peas-haulm; which should be constantly taken off in mild Weather, otherwise it will endanger the rotting of the Plants. In the Spring the Earth should be taken from the Plants gradually, that the Stems may advance; and in *June* their Heads will be formed much like a small Artichoke, but full of sharp Thorns: in these Heads the Seeds are contained, and will be ripe in *August*.

CLUTIA.

This Plant was named by the learned Dr. Boerhaave of Leyden, in Memory of *Augerius Clute*, who was a curious Botanist.

The Characters are;

It hath a rose-shaped Flower, consisting of five Leaves; in the Centre arises the Pointal, surrounded by five Stamina: this Pointal afterward becomes the Fruit, which is divided into three Parts, and hath three Cells, in which are contained Seeds.

We have but one Species of this Plant, which is;

CLUTIA Æthiopica frutescens, portulacæ folio, flore ex albidovirescente. Boerb. Shrubby Ethiopian Clutia, with a Purslane Leaf, and a greenish white Flower.

This Plant is propagated by Seeds, which should be sown early in the Spring, on a moderate Hot-bed, observing to water the Bed gently from time to time, as the Surface becomes dry; and in the Heat of the Day the Glasses should be raised to admit fresh Air, and let the Steam arising from the Bed to pass off. If the Bed be of a proper Temper for Heat, the Plants will appear in about a Month after sowing; and when they are about two Inches high, they should be carefully taken up, and transplanted each into a separate small Pot filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; after which time they should be frequently refreshed with Water, and the Glasses should be raised every Day, when the Weather is warm, to admit fresh Air; otherwise the Plants will draw up very tall, and become very weak. Toward the latter End of *June*, if the Plants have made a good Progress, they will be near a Foot in Height: therefore you should then begin to inure them to bear the open Air; and the middle of *July*, they may be removed out of the Hot-bed, and placed in the open Air, in a warm Situation, where they may be defended from strong Winds. During the Summer Season, these Plants must be frequently watered; but it should not be given in too large Quantities, especially while the Plants are young. Toward the latter End of *September*, the Plants must be removed into Shelter; for if they are exposed too late in Autumn, they will be in Danger of suffering by morning Frosts. In Winter these Plants should be placed in a moderate Stove for the first Season, while they are young; but after they have obtained Strength, they will live in a good Green-house; but then they should not have too much Water in cold Weather. This Plant will rise to the Height of three or four Feet, and become shrubby; and being an Ever-green, will add to the Variety in the Green-house.

COA. This Plant was so named by Father Plumier from the Island of *Cous*, which gave Birth to the Prince of Physicians *Hippocrates*. We have no English Name for this Plant.

The Characters are;

It hath a globular bell-shaped Flower, consisting of one Leaf; from whose Cup arises a multifid Pointal,

Pointal, fixed like a Nail in the binder Part of the Flower; which afterward becomes a Fruit, composed of three membranaceous Seed-vessels, which are compressed, bivalve, and divided into two Cells, in which are contained oblong winged Seeds.

We have but one Species of this Plant, which is;

Coa scandens, fructu trigemino subrotundo.
Plum. Climbing Coa, with a roundish Fruit, which opens into three Parts.

This Plant was observed by Father Plumier, (in the French Islands in America) and hath been since found in great Plenty in the Spanish Settlements in America, particularly about Campechy, from whence the Seeds have been sent by Mr. Robert Millar, Surgeon, to some curious Persons in this Country, who have raised several of the Plants; but as they are very young, so it can't be expected that any of them will produce Flowers until they are three or four Years old, because they seem to be of slow Growth.

This Plant is propagated by Seeds, which must be obtained from the Places where it naturally grows, which should be sown early in the Spring, in small Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth as often as it becomes dry; and in the Heat of the Day, the Glasses of the Hot-bed should be raised to admit fresh Air, and let the Steam, which may arise from the Bed, pass off; and if the Nights should prove cold, the Glasses should be covered with Mats. If this be duly observed, the Plants will begin to appear in three Weeks or a Month after sowing; when you should be careful to sprinkle them frequently with Water, but do not let them have too much at each time; for while they are very young, they will be in danger of rotting, if they are kept too moist. You must also observe to admit fresh Air to them, in proportion to the Warmth of the Season, otherwise they will draw up very weak; which should always be carefully prevented, because few Plants which are drawn up tender at first, will ever after become so strong and beautiful as those which are brought up hardily from the Beginning.

When the Plants are about two Inches high, they should be carefully transplanted each into a separate Pot, filled with light fresh Earth, and plunged into the Hot-bed again, observing to shade the Glasses every Day when the Sun is warm, until the Plants have taken new Root; after which time they should be raised every Day to admit fresh Air to the Plants, in Proportion to the Warmth of the Season. During the Summer Season, these Plants must be frequently refreshed with Water; and when their Roots have filled the Pots in which they were first planted, they should be shaken out of them, and their Roots pared round, and then put into Pots a little larger than the former, which must be filled with light fresh rich Earth, and then plunged again into the Hot-bed; for these Plants will not live in the open Air in this Country: so that when they are grown too large to remain under the Glasses

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of the Hot-bed, they should be removed into the Bark Stove, where they should be placed with the tenderest Exoticks, and heated with great Care. This Plant commonly rises to the Height of five or six Feet, but being a trailing Plant must be supported by a Stake; otherwise it will trail on the neighbouring Plants in the Stove, and injure them. It is ever-green, and the Leaves being of a shining green Colour, it makes a pretty Variety amongst other tender exotic Plants.

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Seeds will dry, and their Covering become so hard, as to prevent their Growing. When the Plants are come up about two Inches high, which may be expected in Six Weeks after sowing, if the Seed be fresh, they should be carefully shaken out of the Pots, and separated, putting each into a small half-penny Pot, filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark; then water them pretty well, to settle the Earth to their Roots, and in the Heat of the Day cover the Glasses of the Hot-bed, to screen the Plants from the Sun, until they have taken new Root, which will not be longer than a Fortnight; after which time they must have a large Share of fresh Air admitted to them, by raising the Glasses with Bricks every Day, when the Weather is warm: you must also frequently refresh them with Water in hot Weather, which if duly observed, the Plants will have obtained Strength enough by the Beginning of July to bear the open Air, to which they must then be inured by Degrees; and the Middle of July they should be taken out of the Hot-bed, and placed in a warm Situation, where they may be screened from strong Winds; in which Situation they may remain until the End of September, when they should be removed into the Green-house. For the first Year they are somewhat tenderer, than they will be when they are grown large; so that the first Winter they should be placed in the warmest Part of the Green-house, where they may enjoy the Heat of the Sun, and be secured from Cold.

After the first Year these Plants may be treated as many other exotic Plants which come from the same Country, and only require to be protected from great Cold; so may be placed in the open Air during the summer Months, and in Winter removed into the Green-house, and placed where they may enjoy as much free Air as possible in mild Weather; for if these Plants are kept too warm, or too closely confined from the Air, they will make long weak Shoots, and become sickly. These Plants must be new-potted every Spring, when the Earth should be carefully pared off from their Roots, and fresh Earth added to fill the Pots; and as the Plants advance in Size, so they should have larger Pots; but they must not be put into Pots too large, for nothing is more injurious to most Plants than over-potting of them.

These Plants, in the natural Country of their Growth, become large Trees; but in Europe, where they are confined in Pots or Tubs, it cannot be expected they should grow so large. The largest Plant of these Kinds I have yet seen, was not more than eight Feet high; but as they retain their Leaves throughout the Year, which are of a fine silver Colour, so they merit a Place in the Green-house, for the beautiful Variety they add among other exotic Plants.

CONVOLVULUS, Bindweed.

The Species omitted in the former Volume are;

1. CONVULVULUS radice tuberosa esculenta,

spinachia folio, flore albo, fundo purpureo, semine post singulos flores singulo. Sloan. Cat. White and yellow Spanish Potatoes.

2. CONVULVULUS radice tuberosa esculenta minore purpurea. Sloan. Cat. Red Spanish Potatoes.

3. CONVULVULUS radice tuberosa cathartica. Houst. The Jalap.

4. CONVULVULUS radice tuberosa maxima, foliis bederaceis incanis, floribus maximis purpureis, semine villosa. Houst. Large tuberous rooted Bindweed, with hoary Ivy Leaves, large purple Flowers, and hairy Seeds.

5. CONVULVULUS pentaphyllos, folio glabro dentato, viticulis hirsutis. Plum. Cat. Five-leav'd Bindweed, with smooth indented Leaves, and hairy Stalks.

6. CONVULVULUS polyanthos niveus, folio subrotundo majori. Plum. Cat. American Bindweed, with many white Flowers, and a larger roundish Leaf.

7. CONVULVULUS luteus polyanthos. Plum. Cat. Yellow many-flowered Bindweed.

8. CONVULVULUS amplissimo folio cordiformi, flore maximo purpurascens. Plum. Cat. Bindweed with a large heart-shaped Leaf, and a large purplish Flower.

9. CONVULVULUS amplissimo folio cordiformi, flore albo maximo. Plum. Cat. Bindweed with a large heart-shaped Leaf, and a large white Flower.

10. CONVULVULUS coccineus heptaphyllos, radice crassissima. Plum. Cat. Scarlet Bindweed, with seven Leaves, and a thick Root.

11. CONVULVULUS pentaphyllos hirsutus. Plum. Cat. Hairy five-leaved Bindweed.

12. CONVULVULUS polyphyllos, flore & fructu purpureis maximis. Plum. Cat. Many-leaved Bindweed, with the largest purple Flower and Fruit.

13. CONVULVULUS minimus villosus, belianthemifolius. Plum. Cat. The least hairy Bindweed, with a dwarf Cistus Leaf.

14. CONVULVULUS pentaphyllos minor, flore purpureo. Sloan. Cat. Lesser five-leaved Bindweed, with a purple Flower.

15. CONVULVULUS polyanthos, foliis & viticulis purpureis. Many-flowered Bindweed, with purple Stalks and Leaves.

16. CONVULVULUS Americanus, aristolochiaefolio glabro, viticulis hirsutis, flore majore purpureo, semine lanuginoso. American Bindweed, with a smooth Birthwort Leaf, hairy Stalks, a large purple Flower, and hairy Seeds.

17. CONVULVULUS Americanus, foliis oblongis hirsutis, flore minore purpurascens, semine minimo. American Bindweed, with hairy oblong Leaves, a small purplish Flower, and the least Seed.

18. CONVULVULUS folio bederae, flore dilute aurantio. Breyn. Bindweed with an Ivy Leaf, and a pale Orange-coloured Flower.

19. CONVULVULUS Syriacus, & Scammonea Syriaca. Mor. Hist. The Scammony.

20. CONVULVULUS Indicus alatus maximus, foliis ibisco nonnihil similibus, angulosis. Hort. Lugd. Bat. The Turbith of the Shops.

The two Kinds of Potatoes are much cultivated in the West-Indies, where they are a great

great Part of the Food of the Inhabitants; and from these Roots they make a Drink which they call *Mobby*; which is done by stewing the Roots over a gentle Fire till they are soft; then they break the Roots, and put them into fair Water, letting them remain therein two or three Hours, in which Time the Water will have drawn out the Spirit of the Root; then they put the Liquor and Roots into a woollen Bag, and strain the Liquor through into a Jar, when in two Hours after it will begin to work; then they cover the Jar, and let it remain until the next Day, when it will be fit to drink. This Liquor they make stronger or weaker, by putting a greater or less Quantity of Roots into the Water. It is a very sprightly Drink, but not subject to fly into the Head, nor will it keep good longer than four or five Days.

These Plants are propagated with great Ease, for every Piece of the Root, which has an Eye or Bud, will grow, and send out Branches trailing on the Ground, which emit Roots at every Joint, and form a large Tuber or Potatoe at each, which in those warm Countries will be full grown, and fit for Use in three or four Months time; so that from one Root planted there will be twenty or thirty fair Roots produced. Some of these Roots have been brought from *America* into *Europe*, and are now frequently cultivated in *Spain* and *Portugal*, from both which Places the Roots are annually brought into *England*, and are by some Persons greatly esteemed; tho' in general they are not so well liked as the common Potatoe, being too sweet and luscious for most Palates.

In *England* these Plants are sometimes cultivated by curious Persons, after the following Manner: The latter End of *March*, or the Beginning of *April*, they prepare a Heap of hot Dung; then having chose a warm Spot of light Ground, they dig Holes about eight Feet asunder, into each of which they put two or three Barrows of the hot Dung, which must be laid smooth, raising it high in the middle; then they cover the Dung with light rich Earth, and upon the Top of each Hill they plant two or three Pieces of sound Roots, each having an Eye or Bud; then they cover the Hills with Bell or Hand Glasses, to preserve a Heat in that Part of the Hill where the Roots are planted, as also to prevent the Rain from rotting the Roots. In about a Fortnight or three Weeks after planting they will begin to shoot, when the Glasses must be raised on one Side every Day, to admit fresh Air to the Plants; and they must be frequently refreshed with Water, but it should not be given them in large Quantities, until the Plants are grown pretty strong, lest thereby you rot the Roots. When the Vines have spread so far as to reach the Sides of the Glasses, the Glasses must be raised with three Bricks, to allow Room for the Vines to spread; but the Glasses should not be taken quite away from the Plants until *June*, when the Plants will be past Danger of Injury from the Cold. As these Vines spread, so the Ground about them should be loosened,

that they may more easily strike their Roots into it; and in dry Weather the Vines should be watered all over, three or four times a Week; which greatly strengthen the Plants, and cause the Roots which are formed at each Joint of the Vines, to grow large and fair; they must also be constantly kept clear from Weeds, which, if suffered to grow amongst the Plants, will over-bear and greatly weaken or destroy them. These Roots must remain undisturbed till Autumn, when the first Approach of Frost will pinch the tender Leaves of the Vines, at which Time you must immediately take up the Roots; for if the Frost should reach them, it will intirely destroy them. These Roots may be kept in dry Sand in a warm Place for Use in the Winter, and a few of the soundest must be preserved to make a fresh Plantation in the Spring.

The *Jalap*, whose Root has been long used in Medicine in *Europe*, is a Native of the Province of *Halapa*, about two Days Journey from *La Vera Cruz* in the *Spanish West-Indies*, from whence the Root is sent in great Quantities every Year to *Europe*; but it is of late that the Plant has been known to the *Europeans*; for Dr. *Tournefort*, upon the Information of Father *Plumier*, has delivered it as one Species of the *Marvel of Peru*, and constituted the Genus under the Title of *Jalap*: But my late learned Friend Dr. *William Houstoun*, who was at *La Vera Cruz* two or three times, procured some Plants from *Halapa*, by his Interest with an ingenious *Spaniard*; which he carried to *Jamaica*, and planted there; by which he was informed truly, that it was one Species of *Convolvulus*, and accordingly gave it the Name I have here mentioned it under.

This and most of the other Sorts of *Convolvulus* here mentioned, were found in several Parts of *America*, by the fore-mentioned Dr. *Houstoun*, who sent the Seeds of them into *England*, where they have been cultivated; but as most of them are abiding Plants, and require a warm Stove to preserve them in Winter, so few of them have been maintained here: for they spread and ramble so far, that few Stoves now built are tall enough to contain them; and if they are intermixed with other Plants, they will twist themselves round whatever Plants grow near them, and will soon over-bear and destroy them, if not timely prevented. The only Stoves yet built, within my Knowledge, proper for these Plants, are at the Right Hon. the Lord *PETRE's* at *Thorndon-Hall* in *Essex*; where there are Borders of Earth in the back Part of the Stoves, and Trellasses thirty Feet high, to support these and other climbing Plants; at which Place we may hope to see these and most other exotic Plants of large Growth, in greater Perfection than in any other Part of *Europe*; for this noble Patron of Gardening has erected the most judicious and magnificent Stoves that were ever contrived; and these are so curiously stocked with Plants from the several Parts of the World, that it is already (tho' but lately executed) one of the most curious and magnificent Sight perhaps in the whole World.

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All these Sorts of *Convolvulus* are propagated by Seeds, which should be sown in a moderate Hot-bed early in the Spring: those Sorts which have large Seeds, should be sown very thin, and buried deeper in the Earth, than those which have small Seeds; in about a Fortnight after they are sown, the Plants will begin to appear above Ground, when the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants; otherwise they will draw up weak, and twist themselves together, so as to render it difficult to separate them. When the Plants are about three Inches high, they should be carefully taken up, and each planted in a small Pot filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to shade the Glasses every Day with Mats, until the Plants have taken new Root; after which Time they should have a large Share of fresh Air, and in warm Weather they must be frequently watered. When the Plants have filled the Pots with their Roots, they should be shaken out, and planted into larger Pots, filled with fresh Earth, and then placed in the Stove, where they may have room to climb, and their Shoots either twisted on an Espalier made in the back Part of the Stove for these and other rambling Plants, or else supported with long Stakes; otherwise they will ramble over whatever Plants stand near them. Some of these Sorts will produce Flowers the first Season, but others will not flower until the second or third Year, nor will they flower kindly, unless they have a large Share of fresh Air, especially in warm Weather. These Plants will continue several Years, provided they are managed rightly; and will produce Flowers and Seeds every Year, and make a fine Appearance in the Stove, when they are in Flower.

CONYZA, Fleabane.

The Species omitted in the former Volume are;

1. *CONYZA fruticosa*, cisti odore, floribus pallide purpureis, summitatibus ramulorum infidentibus, capitulis & semine minoribus. Sloan. Cat. Fam. Shrubby American Fleabane, smelling like the Rock-rose, with pale purple Flowers growing on the Top of the Branches, and smaller Heads and Seeds.

2. *CONYZA fruticosa*, cisti odore, floribus pallide purpureis, summitatibus ramulorum infidentibus, capitulis & semine majoribus. Sloan. Cat. Fam. Shrubby American Fleabane, smelling like the Rock-rose, with pale purple Flowers growing on the Top of the Branches, and larger Heads and Seeds.

3. *CONYZA arborescens tomentosa*, foliis oblongis, floribus in summitatibus ramulorum racemosis sparsis albicantibus. Houst. Woolly Tree-like Fleabane, with longish Leaves, and white Flowers, growing in thin Bunches on the Top of the Branches.

4. *CONYZA frutescens*, flore luteo umbellato. Houst. Shrubby American Fleabane, with yellow Flowers, growing in an Umbel.

5. *CONYZA arborescens*, foliis oblongis, floribus singulis, tribus flosculis constantibus. Houst. Tree-like American Fleabane, with longish Leaves, and each Flower has constantly three Florets.

6. *CONYZA scandens*, lauri foliis asperis, capitulis spicatis rotundis, floribus albis. Houst. Climbing American Fleabane, with rough Bay-leaves, and white Flowers growing on round Spikes.

7. *CONYZA fruticosa*, flore pallide purpureo, capitulis e lateribus ramulorum spicatis exeuntibus. Sloan. Cat. Fam. Shrubby American Fleabane, with pale purple Flowers growing in Spikes from the Side and at the Top of the Branches.

8. *CONYZA major odorata*, five *Baccharis*, floribus purpureis nudis. Sloan. Cat. Fam. Greater sweet-smelling Fleabane, with naked purple Flowers.

9. *CONYZA major inodora*, belenii folio integro, sicco & duro, cichorii flore albo, e ramorum lateribus exeunte. Sloan. Cat. Greater unsavory Fleabane, with hard dry Elecampane Leaves, and white Flowers growing from the Side of the Branches.

10. *CONYZA fruticosa*, folio hastato, flore pallide purpureo. Sloan. Cat. Fam. Shrubby American Fleabane, with a spear-shaped Leaf, and a pale purple Flower.

11. *CONYZA urticae folio*. Sloan. Cat. Fam. American Fleabane with a Nettle Leaf.

12. *CONYZA herbacea*, caule alato, salicis folio, floribus umbellatis purpureis minoribus. Houst. Herbaceous American Fleabane, with a Willow Leaf, and smaller purple Flowers growing in an Umbel.

13. *CONYZA odorata*, bellidis folio viloso & viscoso. Houst. Sweet-smelling Fleabane, with a viscous hairy Daisy Leaf.

14. *CONYZA symphyti facie*, flore luteo. Houst. American Fleabane, with the Face of Comfery, and a yellow Flower.

15. *CONYZA linariae folio*, floribus parvis spicatis albis. Houst. American Fleabane, with a Toad-flax Leaf, and small white Flowers growing in Spikes.

These shrubby Fleabanes are Natives of the West-Indies, where they usually grow about six or seven Feet high, and some of the Tree-kinds ten or twelve Feet high, and divide into many Branches. They are all propagated by Seeds, which should be sown soon after they are ripe; for as they have light downy Seeds, so they will not retain their growing Quality very long. If the Seeds are sown in Autumn, they will remain in the Ground all the Winter, and the Plants will appear the following Spring; but then the Pots in which the Seeds are sown, should be plunged into a Hot-bed of Tanners-bark, and secured from Cold, otherwise the Seeds will perish in Winter. And when the Seeds are kept out of the Ground till Spring, they seldom grow: but as these Plants seldom produce Seeds in this Country, so the surest Method to obtain these Plants, is to have their Seeds sown in a Box of Earth soon after they are ripe, in the natural Countries of their Growth, and sent over

to *England*. When these Tubs of Earth arrive, they should be plunged into a moderate Hot-bed of Tanners-bark, and frequently refreshed with Water, which will soon bring up the Plants, if their Seeds were not destroyed in their Passage.

When the Plants begin to appear above Ground, the Glasses of the Hot-bed should be raised every Day in warm Weather, to admit fresh Air to the Plants; otherwise they will draw up weak, and be soon spoiled: they must also be frequently refreshed with Water in warm Weather; for they are all very thirsty Plants, most of them naturally growing in low swampy Grounds. When the Plants are grown about two Inches high, they should be carefully taken up, and each planted in a separate Pot filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners Bark, observing to shade the Glasses of the Hot-bed every Day with Mats, to screen the Plants from the Heat of the Sun, until they have taken new Root; after which time they must have a large Share of fresh Air, as also a great Quantity of Moisture in warm Weather. In Winter, these Plants must be placed in the Stove, where they may enjoy a moderate Warmth; for if they are kept too hot, they will make weak Shoots in Winter, which will render them very unsightly. In Summer these Plants must have a large Share of fresh Air, but they must not be placed in the open Air, for they are too tender to thrive abroad in this Climate.

These Plants will produce their Flowers in two or three Years after they are raised, and will continue many Years, provided they are carefully managed, and will flower annually toward the latter Part of the Summer.

The herbaceous Kinds must be propagated in the same manner as hath been directed for the woody Kinds; but these will decay annually to the Surface, and rise again every Spring from the Root. When the green Shoots begin to decay, the Plants should not be over watered, lest thereby the Roots should be rotted; but during the Time of their Growth, they must be plentifully watered. The surest Method to have these Plants produce their Flowers, is, to plunge the Pots into a moderate Hot-bed of Tanners Bark, in the Spring, always observing to let them have a large Share of Air in warm Weather, to prevent their shooting too weak, and water them frequently; with this Management they will produce their Flowers every Year: but as they rarely produce ripe Seeds in *England*, so the Pots must be removed into the Stove in Winter to preserve their Roots, which may be parted in the Spring, at the Time when they are plunged into the Hot-bed, by which Method they may be increased.

COPAIBA, The Balsam of Capevi Tree.

The Characters are;

It hath a Flower consisting of five Leaves, which expands in Form of a Rose; the Pointal is fixed in the Centre of the Flower, which after-

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ward becomes a Pod; in which are contained one or two Seeds, which are surrounded with a Pulp of a yellow Colour.

We know but one Sort of this Tree, which is;

COPAIBA folio subrotundo, flore rubro. The Balsam of Capevi, with a roundish Leaf, and a red Flower.

This Tree grows near a Village called *Ayapel*, in the Province of *Antiochi*, in the *Spanish West-Indies*, this is about ten Days Journey from *Carthagena*. There are great Numbers of these Trees in the Woods about this Village, which grow to the Height of fifty or sixty Feet; some of these Trees do not yield any of the Balsam; those which do, are distinguished by a Ridge which runs along their Trunks; these Trees are wounded in their Centre, and they place Calabash Shells, or some other Vessels to the wounded Part, to receive the Balsam, which will all flow out in a short Time. One of these Trees will yield five or six Gallons of the Balsam; but though these Trees will thrive well after being tapp'd, yet they never afford any more Balsam.

As this Balsam is used in Medicine, so it deserves our Application to procure the Trees, and cultivate them in some of the *English Colonies of America*; for as the *English* are possessed of Lands, in so many different Latitudes, they might cultivate most Kinds of Trees and Plants, from the different Parts of the World, which are useful in Medicine, Dying, or for any other Purpose of Life.

The Seeds of this Tree were brought from the Country of their Growth, by Mr. Robert Millar, Surgeon, who sowed a Part of them in *Jamaica*, which he informed me, had succeeded very well; so that we may hope to have these Trees propagated in great Plenty in a few Years, in some of the *English Colonies*, if the Slothfulness of the Inhabitants doth not suffer them to perish, as they have the *Cinnamon-tree*, and some other useful Plants, which have been carried thither by curious Persons.

There are not at present any of these Trees in *Europe*, that I can learn; for those Seeds which Mr. Millar sent over to *England*, were all destroyed by Insects in their Passage, so that not one of them succeeded in the several Places where they were sown: But could fresh Seeds be procured, the Plants might be raised in *England*, and preserved in the Bark-stoves very well; for the Country of their Growth is much more temperate than many others, from whence we have been furnished with a great Variety of Plants, which succeed very well in the Stoves, and some of them arrive to a great Degree of Perfection.

CORALLODENDRON, The Coral-tree.

The Species omitted in the former Volume are;

I. **CORALLODENDRON triphyllum Americanum minus**, spinis & seminibus nigricantibus. Tourn. Lesser three-leaved American Coral-tree, with blacker Seeds and Spines.

2. *CORALLODENDRON triphyllum Americanum non spinosum, foliis acutioribus, flore pallido rubente.* Three-leaved American Coral-tree without Spines, having pointed Leaves, and pale red Flowers.

3. *CORALLODENDRON triphyllum Americanum, caudice & nervis foliorum spinosis armatis.* Three-leav'd American Coral-tree, whose Stalk and the Nerves of the Leaves are armed with Spines.

The Seeds of these three Sorts were sent from *Carthagena* in *New Spain*, by Mr. Robert Millar, who collected them in the Neighbourhood of that Place. These are propagated in the same manner as hath been directed in the former Volume, for the three Sorts there mentioned, to which the Reader is desired to turn, to avoid Repetition.

CORIARIA, Myrtle-leav'd Sumack, *vulgò*.

The Characters are;

It hath a Flower composed of ten Stamina (or Threads) each having two Apices, and arise from the Bottom of the Calyx, which is divided into five Parts to the Base. When the Flower is passed, the Pointal (which is contained in another Cup, divided also into five Parts to the Base) becomes (jointly with the Cup) a Fruit containing five kidney-shap'd Seeds.

We have but one Species of this Plant, which is;

CORIARIA vulgaris. Mem. Acad. Scien. Ann. 1711. Myrtle-leav'd Sumack, *vulgò*.

This is a low Shrub, seldom rising above three or four Feet high; the Flowers appear in April, which are produced from the Joints all the whole Length of the Shoots. These consist of several Stamina, or Threads, which are of a red Colour; but there is no great Beauty in the Plant.

I have observed, that the several Plants we have in the *English* Gardens, have no Embryo or Rudiment of the Fruit; which makes me suspect, that they are Male and Female in different Plants; but as Monsieur Nissol, a curious Botanist of *Montpelier*, who has given a particular Account of this Plant to the Academy of Sciences at *Paris*, has taken no Notice of this Difference; I must leave it to be decided by those who may have an Opportunity of examining the Plants in the Country of their Growth.

It may be propagated plentifully from the Suckers, which are produced from the creeping Roots in great Abundance: These should be taken off in March, and planted into a Nursery, to form good Roots; where they may continue one or two Years, and then must be removed to the Places where they are to remain.

This Plant delights in loamy Soil, which is not too stiff; and should be placed where it may have Shelter from the North and East Winds, where it will endure the Cold of our ordinary Winters very well, and will flower better than if it is preserved in Pots, and sheltered in the Winter, as is by some practised.

This Plant is used by the Tanners for dressing their Leather in the South Parts of *France*, where it grows wild in great Plenty.

CORIS. We have no *English* Name for this Plant.

The Characters are;

It hath a monopetalous personated Flower, whose binder Part is tubulous, but the fore Part is shaped like a Fan; from the Flower-cup rises the Pointal, fixed like a Nail in the binder Part of the Flower, which afterward becomes a globular Fruit, divided into several Parts, containing roundish Seeds, which are inclosed by the Calyx.

The Species are;

1. *CORIS cœrulea maritima.* C. B. P. Maritime blue Coris.

2. *CORIS maritima, flore rubro.* C. B. P. Maritime Coris with a red Flower.

3. *CORIS maritima, flore albo.* H. R. Monsp. Maritime Coris with a white Flower.

These Plants grow wild about *Montpelier*, and in most Places in the South of *France*; they seldom grow above a Foot high, and spread near the Surface of the Ground like Heath; and in June, when they are full of Flowers, they make a very pretty Appearance.

They may be propagated by sowing of their Seeds in the Spring, on a Bed of fresh Earth; and when the Plants are about three Inches high, they should be transplanted, some of them into Pots filled with fresh light Earth, that they may be sheltered in Winter, and the others into a warm Border, where they will endure the Cold of our ordinary Winters very well, but in severe Frost they are generally destroyed; for which Reason, it will be proper to have some Plants of each Sort in Pots, which may be put under a common Hot-bed Frame in Winter, where they may be covered in Frosty Weather; but when it is mild, they should have a great Share of free Air. These Plants sometimes produce ripe Seeds in *England*; but as they do not constantly perfect their Seeds, so it will be proper to increase them from Slips and Cuttings, which will take Root if planted in April, on a very gentle Hot-bed, and shaded from the Sun, and duly watered.

CORNUS, The Dog-berry Tree.

The Species omitted in the former Volume are;

1. *CORNUS fœmina Virginiana, angustiore folio.* The *Virginian* Dog-berry Tree, with a narrower Leaf.

2. *CORNUS mas Virginiana, foliis oblongis, fructu rubro majore.* The Male *Virginian* Dog-berry, with oblong Leaves, and a larger red Fruit.

3. *CORNUS mas Virginiana, flosculis plurimis albidis, ex involucrio tetrapetalo rubro irrumpentibus.* D. Banister. Pluk. Phyl. Tab. 26. F. 3. *Virginia* Dog-berry, with many small white Flowers, coming out of a four-leav'd red Involucrum.

4. *CORNUS racemosa, trifolia & quinquefolia, foliis foraminulatis.* Plum. Cat. Branching American Dog-berry, with three or five Leaves.

5. *CORNUS pumila, herbacea, Chamæpericlymenum dicta.* Hort. Elth. Dwarf Honey-suckle, vulgò.

The first, second and third Sorts are very hardy Plants, so will thrive very well in the open Air in this Climate; they may be propagated either by Seeds or Layers; but as their Seeds are seldom perfected in this Country, so the laying down of their tender Branches in the Spring, is the most expeditious Method of propagating them; for when the Seeds are procured from abroad, they remain a whole Year in the Ground, before the Plants appear; whereas the Layers will be sufficiently rooted in one Year for transplanting, so that they will have two Years Growth Advance of those raised from Seeds.

These Plants thrive best on a moist light Ground; for in the Country of their natural Growth, they are commonly found in swampy Places. They usually grow about ten or twelve Feet high, and spread pretty much on every Side into Branches; so should be intermixed with Shrubs of the same Growth, in Wilderness Quarters, where they will make an agreeable Variety.

The fourth Sort is much more tender than either of the former; these may be propagated by Seeds, which must be sown in Pots filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners Bark, observing to water the Pots frequently in warm Weather, as also to raise the Glasses of the Hot-bed to admit fresh Air. These Seeds many times remain in the Ground a whole Year before the Plants will appear; in which Case you must let the Pots remain in the Hot-bed, being careful to weed them; and in Winter the Glasses must be covered with Mats to prevent the Frost from getting to the Seeds, which will destroy them. When the Plants come up, they must be frequently watered; and when they are about three Inches high, they should be taken carefully out of the Pots, and each planted in a separate Pot filled with light fresh Earth, and plunged into a moderate Hot-bed, observing to screen them from the Sun until they have taken new Root; after which time they must be frequently watered, and in warm Weather should have a large Share of fresh Air. In Winter they must be placed in the Stove; for while these Plants are young, they are tender; but when they have acquired Strength, they may be placed in the Green-house in Winter, and in Summer they may be exposed in the open Air in a warm Situation. These Plants will produce their Flowers in England, but they never perfect their Seeds in this Country.

The Dwarf Honey-suckle grows on Cheviot Hills in Northumberland, and on many high Mountains in Northern Countries, but are with Difficulty preserved in Gardens. They must be planted in a strong moist Soil, and a shady Situation; where they will sometimes

produce Flowers, but seldom abide many Years in Gardens.

CORNUTIA. (We have no English Name for this Plant. It is so called from CORNUTUS, a Physician of Paris, who published a History of Canada Plants.)

The Characters are;

It hath a monopetalous, personated Flower, whose upper Lip stands erect, but the under Lip is divided into three Parts; from the Flower-cup arises the Pointal, which is fixed like a Nail in the hinder Part of the Flower, which afterward becomes a spherical succulent Berry, including Seeds which are for the most part Kidney-shaped.

There is but one Species of this Plant yet known, which is,

CORNUTIA flore pyramidato cœruleo, foliis incanis. Plum. Cornutia with a pyramidal Flower, and hoary Leaves.

This Plant was first discovered by Father Plumier in America, who gave it the Name. It is found in plenty in several of the Islands in the West Indies, and at Campechy and La Vera Cruz, from both which Places I received the Seeds, which were collected by my late ingenious Friend Doctor William Houstoun.

It is propagated by Seeds, which should be sown early in the Spring on a Hot-bed; and when the Plants are come up, they should be transplanted each into a separate Half-penny Pot, filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which time they should have fresh Air let into the Bed, in Proportion to the Warmth of the Season, and they must be frequently watered (for it naturally grows on swampy Soils). When the Plants have filled these Pots with their Roots, they should be shifted into others of a larger Size, and plunged into the Hot-bed again, where they should be continued till October; when they must be removed into the Bark-stove, and plunged into the Tan; for otherwise it will be very difficult to preserve it through the Winter. The Stove in which these Plants are placed, should be kept to the temperate Heat marked on Mr. Fowler's Thermometers, which will agree better with them than a hotter Stove. The third Year from Seed these Plants will flower, when they make a fine Appearance in the Stove, but they never perfect their Seeds in England.

They may be also propagated by Cuttings, which if planted into Pots filled with fresh Earth, and plunged into a Bark-bed, observing to shade and water them, will take Root, and must be afterwards treated as the Seedling Plants.

CORONILLA, Jointed-podded Colutea.

The Species omitted in the former Volume are;

7. *CORONILLA filiquis & seminibus crassioribus.* Tourn. Jointed-podded Colutea, with thick Pods and Seeds.

8. *CORONILLA Americana scandens pentaphylla*. Plum. Five-leav'd American joint-ed-podded Colutea, with climbing Stalks.

The seventh Sort grows to the Height of two or three Feet, and branches out on every Side, so as to form a regular Shrub. This may be propagated by Seeds, which should be sown on a moderate Hot-bed in the Spring; and when the Plants are about two Inches high, they should be carefully transplanted into small Pots, filled with light fresh Earth, and plunged into a very moderate Hot-bed, being careful to screen them from the Sun until they have taken new Root; after which time they must have a large Share of fresh Air, otherwise they will draw up very weak; they must also be frequently watered in warm Weather. When these Plants have acquired Strength, they should be inured to bear the open Air by degrees; for in Summer they should be taken out of the Hot-bed, and some of them may be planted in warm Borders; but it will be proper to keep some in Pots, that they may be sheltered in Winter; for in severe Frost, those in the Borders will be in danger of suffering thereby. These Plants produce their Flowers in the Spring, when they make an agreeable Appearance, and in August they perfect their Seeds.

The eighth Sort was discovered by Father Plumier in America. I received the Seeds of this Plant from *Cartagena*, which was sent me by my late ingenious Friend Doctor William Houstoun. This Plant is propagated by Seeds, which should be sown early in the Spring on a moderate Hot-bed; and when the Plants are come up, they should be each transplanted into a Half-penny Pot, filled with fresh rich Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which time they should have Air and Water in Proportion to the Warmth of the Season; and when they have filled these Pots with their Roots, they should be shifted into Pots of a larger Size, and plunged into the Hot-bed again, where they must remain until Autumn, when they should be removed into the Stove, and plunged into the Tan. These Plants must be constantly kept in the Bark-stove, and placed among Plants which require a moderate Heat; where they will thrive and flower, and should be supported by tall Sticks, round which they will twine, as Hops do; so that they must not be suffered to twist round other Plants, lest they over-bear and spoil them. These are very proper Plants to place against an Espalier on the back Part of the Stove, amongst other climbing Plants, where they will make an agreeable Variety.

This Sort will continue two or three Years, provided it be carefully managed, and will sometimes produce ripe Seeds in this Country; but it will be proper to lay down some of the Shoots, either into the Tan, or Pots of fresh Earth plunged into the Tan, because these will often take Root, whereby a Supply of young Plants may be obtained; which is a sure Method to preserve the Kind in this

Country, where they do not commonly perfect their Seeds.

COTYLEDON, Navel-wort.

The Species omitted in the former Volume are;

1. *COTYLEDON major arborescens Afra*, foliis orbiculatis glaucis, limbo purpureo & maculis viridibus ornatis. Boerb. Ind. alt. Greater Tree-like African Navel-wort, with rounder Sea-green Leaves, having purple Edges, and spotted with Green.

2. *COTYLEDON Capensis, folio semiglobato*. Hort. Elth. Navel-wort of the Cape of Good Hope, with thick half-globular Leaves.

The first of these Plants usually grows to the Height of two or three Feet in this Country, and divides into many Branches: it is easily propagated by Cuttings in any of the Summer Months, if, after they are taken from the Plants, they are laid in a dry Place for a Week or ten Days, that the wounded Parts may heal before they are planted; otherwise they are subject to rot. When the Cuttings are fit to plant, they should be each put into a Half-penny Pot, filled with a Mixture of fresh Earth, Lime-rubbish and Sea-sand, in equal Proportion; then plunge the Pots into a very moderate Hot-bed, which will greatly promote their Rooting: in about six Weeks after Planting, the Cuttings will be well rooted, when they may be taken out of the Hot-bed, and placed in the open Air, in a Situation where they may be defended from strong Winds; where they may remain till the middle of October, provided there happens no frosty Weather before; then they must be removed into an airy Glass-case, where they may be defended from the Frost and Wet, and enjoy a large Share of fresh Air; in which Place they will thrive better than in a Green-house, where they cannot have so much free Air.

The second Sort is of humbler Growth, seldom rising above a Foot high; this produces many short Branches near the Ground, but never spreads very far, so may be confined in small Pots. This is propagated in the same Manner as the former Sort, and should be treated in the same Method.

COURBARIL, [*This is the American Name by which the Indians call this Tree.*] The Locust-tree, vulgò.

The Characters are;

It hath a papilionaceous Flower, from whose Calyx arises the Pointal; which afterward becomes a unilocular hard Pod, including roundish hard Seeds, which are surrounded with a fungous stringy Substance.

We know but one Species of this Plant, viz.

COURBARIL bifolia, flore pyramidato. Plum. Nov. Gen. Courbaril with two Leaves set together, and a pyramidal Flower, commonly called Locust-tree, by the English Inhabitants of America.

The Pods of this Tree are frequently brought from America, by the Title of Locust, from the Seeds of which these Plants may be raised. These Seeds should be sown on a Hot-

Hot-bed early in the Spring, and when the Plants are come up, they should be very carefully taken up, and each planted into a small Pot, filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which Time they should have Air and Water in proportion to the Warmth of the Season; but they will not bear to be quite exposed to the open Air in *England*, even in the hottest Part of Summer. In Winter these Plants must be removed into the Bark-stove, and plunged into the Tan, amongst the tenderer Sorts of exotic Plants; and during that Season they should be frequently refreshed with Water, but it must not be given to them in large Quantities, for they are impatient of much Wet. If these Plants are continued in the Bark-stove, and shifted into larger Pots as they increase in Size, they may be preserved; but I believe it will be many Years before they will produce Flowers in *Europe*, for they are of very slow Growth, after the first six Months, being in this respect like the *Acajou*.

CRASSULA, Lesser Orpine or Houseleek.

The Characters are;

It hath the Appearance of Houseleek or Navelwort, from the latter of which it only differs in having a short tubulous Flower, consisting of one Leaf.

The Species are;

1. CRASSULA altissima perforata. Hort. Elth. Tallest Crassula, with Leaves surrounding the Stalks, commonly called *Aloe perfoliata*.
2. CRASSULA anacampserotis folio. Hort. Elth. Crassula with an Orpine Leaf.
3. CRASSULA portulacæ facie, arborescens. Hort. Elth. Tree-like Crassula, with the Face of Purslain, commonly called the *Purslain-tree*.
4. CRASSULA cæposa longifolia. Hort. Elth. Onion-like Crassula, with a long Leaf.
5. CRASSULA caulescens, foliis sempervivi cruciatis. Hort. Elth. Stalky Crassula, with Houseleek-leaves.
6. CRASSULA mesembrianthemis facie, foliis longioribus asperis. Hort. Elth. Crassula with the Face of Ficoides, and long rough Leaves.
7. CRASSULA orbicularis repens, foliis sempervivi. Hort. Elth. Creeping orbicular Crassula, with Houseleek Leaves.
8. CRASSULA portulacæ facie, repens. Hort. Elth. Creeping Crassula, with the Appearance of Purslain.

These Plants are Natives of the *Cape of Good Hope*, from whence they were brought into the *European* Gardens. The first, third and fifth Sorts, will grow to be shrubby: the first doth not send forth any Side-branches, unless the Top be cut off, or some way injured; but it may be trained up six or eight Feet high, if it is supported with a Stake. The third Sort grows almost in a pyramidal Form, and the Stalks and Leaves have the Appearance of Purslain. The fifth Sort grows very bushy, and the Stalks are very full of Joints, and so

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brittle, that on the Touch they break, and the Pieces which fall on the Ground will take Root, so that it is easily propagated. The other Sorts are of lower Growth, most of them trailing on the Ground. The eighth Sort doth not continue above two Years, but it frequently ripens Seed, which if permitted to scatter upon the Earth in the Pots, and they are sheltered in Winter, will produce young Plants, whereby the Kind may be easily preserved.

The third Sort has not produced any Flowers in this Country, that I could ever hear; but from the Appearance of the Plant, it is ranged with these Plants.

All these Sorts may be easily propagated, by planting their Cuttings in any of the Summer Months, on a shady Border, where they will soon take Root, and may be then potted in a sandy-rubbishing Earth; and must be treated in the same Manner as the *Ficoides*'s, to which I shall refer the Reader to avoid Repetition.

CROTOLARIA.

The Species omitted in the former Volume are;

1. CROTOLARIA Americana, caule alato, foliis pilosis, floribus in thyrsis luteis. Martyn. Decad. 5. American Crotolaria, with a winged Stalk, hairy Leaves, and yellow Flowers growing in a Spike.
2. CROTOLARIA ari folio sagittato, flore luteo. Plum. Cat. Crotolaria with a spear-shaped arum Leaf, and a yellow Flower.
3. CROTOLARIA ari folio sagittato, flore purpurascens. Plum. Cat. Crotolaria with a spear-shaped arum Leaf, and a purplish Flower.
4. CROTOLARIA frutescens hirsuta, flore luteo, ramulis alatis, foliis mucronatis. Houtt. Shrubby hairy Crotolaria, with a yellow Flower, winged Branches, and pointed Leaves.

The first three Sorts are annual Plants, which should be raised on a Hot-bed early in the Spring; for if they are not brought forward at that Season, they seldom perfect their Seeds in this Country. As these Sorts are to be managed in the same Manner as those which are mentioned in the former Volume, so it is needless to repeat it here.

The fourth Sort will grow to the Height of six or seven Feet, provided they are preserved in a warm Stove, otherwise they will not live through the Winter. These are propagated by Seeds which should be sown on a Hot-bed early in the Spring; and when the Plants are come up an Inch high, they should be carefully transplanted into small Pots filled with fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which Time, they should have Air and Water in proportion to the Warmth of the Season. In this Bed they may remain until the Plants reach the Glasses, when they must be removed into the Bark-stove, observing to shift the Plants into larger Pots, as they shall require it.

CUIETE, The Calabash-tree.

The Characters are;

It hath a Flower consisting of one Leaf of an anomalous Figure, and divided at the Brim into several Parts; from whose Cup rises the Pointal, fixed like a Nail in the binder Part of the Flower; which afterward becomes a fleshy Fruit, having a hard Shell, inclosing many heart-shaped Seeds.

The Species are;

1. CUIETE *foliis oblongis angustis, magno fructu ovato.* Plum. Nov. Gen. The Calabash-tree with narrow oblong Leaves, and a large oval Fruit.

2. CUIETE *latifolia, fructu putamine fragili.* Plum. Nov. Gen. The broad-leav'd Calabash-tree, with tender-shelled Fruit.

3. CUIETE *minima, fructu duro.* Plum. Nov. Gen. The least Calabash-tree, with a hard Fruit.

4. CUIETE *angustifolia, fructu minori globoso.* Plum. Nov. Gen. Narrow-leav'd Calabash-tree, with a lesser globular Fruit.

5. CUIETE *angustifolia, fructu minori ovato.* Plum. Nov. Gen. Narrow-leav'd Calabash-tree, with a lesser oval Fruit.

The first and second Sorts rise to the Height of twenty-five or thirty Feet in the West Indies, where they grow naturally in Woods and the Savanna's. The Shells of this Fruit are used by Negroes for Cups to drink out of; as also for Instruments of Music, by making a Hole in the Shell, and clearing it of the Pulp and Seeds; then they put in small Stones, or the hard Seeds of Trees, with which they make a sort of Rattle.

These Plants are all of them tender, so cannot be maintained in this Country, unless they are preserved in warm Stoves. They are propagated by Seeds, which should be obtained from the Countries where they naturally grow; for they never produce any Fruit in this Country. These Seeds should be sown early in the Spring, in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark; the Earth in these Pots must be frequently refreshed with Water; for if it be kept dry, the Seeds will not vegetate: in about five Weeks after the Seeds are sown, the Plants will begin to appear; when they must be duly watered, and the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants, and let the Steam, which will arise from the Bed, pass off; which is very injurious to young Plants, when it is pent amongst them. When the Plants are about two Inches high, they should be carefully transplanted, each into a separate small Pot, filled with rich light Earth, and plunged into the Hot-bed again, being careful to screen them from the Sun until they have taken new Root; after which Time they must have fresh Air admitted to them in proportion to the Warmth of the Season, and must be duly watered; so as they naturally grow on swampy Grounds, so they require a pretty large Share of Moisture in warm Weather.

In Winter these Plants must be removed into the Stove, and plunged into the Bark-bed;

for they do not thrive well, if they are placed on Boards in a dry Stove; because the Fibres of their Roots, which are toward the Side and Bottom of the Pots, will dry, and retard the Growth of the Plants, if the Pots are not surrounded with Tan, which always retains some Moisture, which keeps the Fibres of the Plants ductile, and thereby is greatly beneficial to them.

In Summer, these Plants may have a large Share of Air, by opening of the Glasses of the Stove; but they will not thrive, if they are taken out of the Stove, and placed in the open Air; so that they should always be kept in the Bark-stove, observing to shift them into larger Pots, as the Plants advance in their Growth. With this Management, these Plants may be preserved many Years, and brought to a large Size; when they will make a fine Appearance amongst tender exotic Plants in the Stove, for they retain their Leaves throughout the Year.

CUPRESSUS, The Cypress-tree.

The Species omitted in the former Volume are;

1. CUPRESSUS *Lusitanica patula, fructu minori.* Tourn. Spreading Portugal Cypress, with a smaller Fruit.

2. CUPRESSUS *Americana, fructu minimo.* American Cypress, with the least Fruit, commonly called White Cedar in America.

The first of these Trees is rarely to be seen in the English Gardens at present, nor is it so well worth Cultivating as any of the other Kinds, it being of humbler Growth, and of a less regular Figure. This may be propagated by Seeds in the same Manner as the common Sort, and is equally hardy; so that whoever hath an Inclination to cultivate this Tree, should procure the Cones from Lisbon, near which Place it grows very common.

The second Sort is a Native of North America, where it grows to a considerable Height, and affords a useful Timber to the Inhabitants for many Purposes. This Sort is extremely worth cultivating in England; for as it grows in a much colder Country, so there is no Danger of its thriving well in the open Air in England; and being an Ever-green of regular Growth, so will add to the Variety in Wilderness Quarters, or other Plantations of Ever-green-trees.

This Sort is propagated by Seeds, which should be sown in the Spring, in Boxes or Tubs filled with light fresh Earth, and placed where they may enjoy the Morning Sun till eleven or twelve o'Clock; in dry Weather they should be duly watered, and constantly kept clear from Weeds: in this Situation they may remain till Michaelmas, when they should be removed to a warmer Place; for the Plants will not appear till the following Spring, so that it will be proper to place the Boxes or Tubs near a South Wall, Pale or Hedge, during the Winter Season, lest by being too much shaded, the Wet of the Winter Season should rot the Seeds. In the Spring following, if these Tubs or Boxes are placed on a moderate Hot-bed, it will bring up the Plants

very soon, and greatly forward their Growth; but as the Spring advances, so they should be inured to bear the open Air by degrees; and in *May* they must be taken out of the Hot-bed, and placed in a sheltered Situation, where they may enjoy the Morning Sun, being careful to keep them clear from Weeds, as also to water them duly in dry Weather. The following Winter it will be proper to remove the Tubs near a South Wall or Pale; for the Plants being very young, are somewhat tenderer than they will be afterward. Toward the latter End of *March*, or the Beginning of *April*, just before the Plants begin to shoot, they should be carefully taken up out of the Boxes; and having prepared a Bed or two (according to the Quantity of Plants raised) of fresh Earth in a warm Situation, the Plants should be planted therein in Rows about eighteen Inches asunder, and about a Foot Distance Plant from Plant in the Rows: this Work should be done in cloudy Weather, or when there is Rain; for in dry Weather, when Easterly Winds commonly blow at this Season, it will be very dangerous to transplant these Plants; so that it had better be deferred a Fortnight longer, till there is an Alteration of Weather, than hazard the Plants. When the Plants are planted, they should be watered to settle the Earth to their Roots; and then the Surface of the Ground should be covered with Mulch, to prevent the Sun and Wind from penetrating to the Roots of the Plants; for nothing is more injurious to these Plants, than to have their Fibres dried when they are transplanted; therefore the Plants should not be taken out of the Tubs, till you are ready to place them in the Ground; for they will not bear to lie out of the Ground any Time without great Danger.

These Plants may remain in the Beds where they are first transplanted, three or four Years; during which Time the Ground must be constantly kept clean from Weeds; and every Spring the Ground must be carefully dug between the Plants, in doing of which great Care should be had, not to disturb their Roots, nor to lay them bare, lest the Wind and Sun should injure them. When the Plants are about two Feet and a half, or three Feet high, they should be transplanted where they are to remain: the Time for this Work is in *April*, in moist cloudy Weather. In taking of the Plants up, there should be as much Earth preserved to their Roots as possible; and if they are to be carried to any Distance, it will be proper to put them in Baskets, to prevent the Earth from falling from them; for if it should, there will be great Hazard of their growing: when they are planted, they must be well watered to settle the Earth to their Roots; and some Mulch should be laid upon the Ground about their Roots, to prevent the Wind and Sun from drying of them; and if the Season should prove dry, it will be proper to water them once or twice a Week until they are thoroughly rooted; after which Time they will require no other Culture, but to keep them clear from Weeds, and dig the Ground

about them every Spring; with this Management the Plants will make great Progress, and in a few Years will be out of any Danger.

This Sort of *Cypress* will grow as large in this Country, as the common Kind; so will be very proper to intermix with them, either in Wildernesses, or in any other Plantations of these Trees, which will make an agreeable Diversity; and the Wood of these Trees may in Time become useful for many Purposes.

But supposing the Timber of these Trees were of no Use, yet are they so very ornamental to Gardens, that no large Garden can be complete without many of these Trees; and it is to these Trees that the *Italian Villa's* owe a great Share of their Beauty: for there is no Tree so proper to place near Buildings: the pyramidal upright Growth of their Branches afford a picturesque Appearance, and do not obstruct the View of the Building; and the Dark-green of their Leaves make a fine Contrast with the White of their Building. So that, where-ever there are Temples or other Buildings erected in Gardens, there is no Sort of Tree so proper to place near them as these. In all the Landscips of *Italian Villa's*, we see many *Cypress* Trees represented, which have a very agreeable Effect in the Picture; and the Trees, when rightly disposed in a Garden, afford a no less agreeable Prospect.

CURURU. This is the *Indian* Name for this Plant, and we know of no *English* Name to it at present.

The Characters are;

It hath a rose-shaped Flower, consisting of four or more Petals, which are placed in a circular Order, from whose many-leav'd Flower-Cup arises the Pointal; which afterward becomes a pear-shaped triangular Fruit, divided into three Parts from the Top to the Bottom, containing three fleshy Seeds, which are fastened to the Seed-vessel by a slender red Filament.

The Species are;

1. *CURURU scandens enneaphylla, fructu racemoso rubro.* Plum. Nov. Gen. Climbing nine-leav'd Cururu, with red Fruit growing in a Bunch.

2. *CURURU scandens pentaphylla.* Plum. Nov. Gen. Climbing five-leav'd Cururu.

3. *CURURU scandens triphylla.* Plum. Nov. Gen. Climbing three-leav'd Cururu.

These Plants grow plentifully in the Island of *Jamaica*, at *La Vera Cruz*, and several other Parts of *America*; where they climb up Trees, and ramble over Hedges, Bushes, or whatever grows near them. The first, which is the largest Plant of Growth, will many times climb up five and twenty, or thirty Feet high; the other two seldom grow above sixteen or eighteen Feet high.

These Plants are preserved in curious botanic Gardens for the sake of Variety, but there is no great Beauty in them. They may be propagated by sowing of their Seeds on a Hot-bed early in the Spring, and when the Plants are come up, they should be each transplanted into a small Half-penny Pot, filled with light fresh Earth, and then plunged into a moderate

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moderate Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which time they should have a large Share of fresh Air admitted to them in warm Weather, and must be frequently refreshed with Water. When the Plants have filled these Pots with their Roots, they should be shifted into others of a larger Size, and plunged into the Hot-bed again, treating them as before; in this Bed they may remain till Autumn (provided there is Room for them under the Glass without being pressed); then they must be removed into the Bark-stove, and placed toward the Backside of the Bed; where if they are supported by a Trelliss, they will climb up to a great Height, and produce Flowers. In Winter these Plants should have a temperate Heat, and must be often refreshed with Water.

CYDONIA, The Quince-tree.

The *Species* omitted in the former Volume are;

1. *CYDONIA fructu oblongo lævi dulci edulique.* Tourn. The Quince-tree, with oblong smooth sweet Fruit, which are eatable.

2. *CYDONIA fructu oblongo minori lanuginoso non eduli.* Tourn. Quince-tree with lesser oblong downy Fruit, which are not eatable.

3. *CYDONIA angustifolia vulgaris.* Tourn. The common Quince-tree, with narrow Leaves.

These three Sorts may be cultivated in the same manner as the common Sorts, and are equally hardy; so that I shall not repeat it in this Place, but shall only observe, that it is the best Way to propagate them, either by Cuttings or Layers; for those which are propagated from Suckers, will always continue to send out a great Number of Suckers from their Roots, which renders them very unflightly.

CYTISUS, The Base-tree Trefoil.

The *Species* omitted in the former Volume are;

1. *CYTISUS glabris foliis subrotundis, pediculis brevissimis.* C. B. P. Round-leav'd smooth Base-tree Trefoil, with short Footstalks. This is commonly sold by the Nursery Gardeners, under the Title of *Cytisus secundus Clusii*.

2. *CYTISUS hirsutus.* J. B. Hairy Base-tree Trefoil.

3. *CYTISUS spinosus.* H. L. Prickly Base-tree Trefoil.

4. *CYTISUS Monspelusanus, medicæ folio, siliquis dense congestis & villosis.* Tourn. Base-tree Trefoil of Montpellier, with medic Leaves, and hairy Pods, growing in Bunches.

5. *CYTISUS incanus, siliquâ longiore.* C. B. P. Hoary Base-tree Trefoil, with a longer Pod.

6. *CYTISUS hirsutus, flore luteo purpurascens.* C. B. P. Hairy Base-tree Trefoil, with a purplish yellow Flower.

7. *CYTISUS glaber viridis.* C. B. P. Smooth green Base-tree Trefoil.

8. *CYTISUS foliis incanis angustis, quasi complicatis.* C. B. P. Base-tree Trefoil, with narrow hoary Leaves.

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9. *CYTISUS humilis argenteus angustifolius.* Tourn. Silvery-dwarf Base-tree Trefoil, with narrow Leaves.

10. *CYTISUS glutinosus, omnium minimus.* Tourn. The least clammy Base-tree Trefoil.

11. *CYTISUS argenteus linifolius, insularum Stæchadum.* Tourn. Silvery Flax-leav'd Base-tree Trefoil, of the *Stæchades Islands*.

12. *CYTISUS Hispanicus procerior, anagrydis folio, floribus glomeratis.* Tourn. Taller Spanish Base-tree Trefoil, with an anagrydis Leaf, and glomerated Flowers.

13. *CYTISUS Hispanicus humilior, floribus glomeratis.* Tourn. Lower Spanish Base-tree Trefoil, with glomerated Flowers.

14. *CYTISUS Lusitanicus, medicæ foliis, floribus in foliorum alis.* Tourn. Portugal Base-tree Trefoil, with a medic Leaf, and the Flowers growing at the Wings of the Leaves.

15. *CYTISUS Lusitanicus, foliis minimis argenteis, parvo flore albo.* Tourn. Portugal Base-tree Trefoil, with the least Silvery-leaves, and a small white Flower.

16. *CYTISUS Lusitanicus, foliis exiguis, magno flore, siliquis latis & tomentosis.* Tourn. Portugal Base-tree Trefoil, with small Leaves, a large Flower, and broad woolly Pods.

17. *CYTISUS spinosus, siliquâ villosâ incanâ.* Tourn. Cor. Prickly Base-tree Trefoil, with white hairy Pods.

18. *CYTISUS spinosus Creticus, siliquâ villis densissimis longissimis & incanis obductâ.* Tourn. Cor. Prickly Base-tree Trefoil of Crete, with Pods covered with a thick long hoary Down.

19. *CYTISUS orientalis minimus humifusus.* Tourn. Cor. The least low Eastern Base-tree Trefoil.

20. *CYTISUS orientalis humifusus, flore magno ex luteo purpurascens.* Tourn. Cor. Low Eastern Base-tree Trefoil, with a large purplish yellow Flower.

21. *CYTISUS orientalis humifusus, facie trifolii pratensis.* Tourn. Cor. Low Eastern Base-tree Trefoil, with the Appearance of Meadow Trefoil.

22. *CYTISUS foliis argenteis.* Wheel. Itin. Silvery Base-tree Trefoil of Sir George Wheeler.

23. *CYTISUS orientalis, medicæ foliis incanis & villosis, flore flavescens.* Tourn. Cor. Eastern Base-tree Trefoil, with hoary and hairy Leaves, and a yellowish Flower.

24. *CYTISUS orientalis latifolius subtus incanus.* Tourn. Cor. Eastern Base-tree Trefoil, with broad Leaves, which are hoary underneath.

25. *CYTISUS Africanus argenteus, flore atropurpureo.* Oldenl. Silvery African Base-tree Trefoil, with a dark purple Flower.

26. *CYTISUS Africanus hirsutus angustifolius.* Oldenl. Hairy African Base-tree Trefoil, with narrow Leaves.

27. *CYTISUS Americanus spinosus, floribus luteis ad alas nascentibus.* Plum. Cat. Prickly American Base-tree Trefoil, with yellow Flowers growing at the Wings of the Leaves.

28. *CYTISUS Americanus frutescens sericeus.* Plum. Cat. Shrubby-silky American Base-tree Trefoil.

29. *CYTISUS*

29. *CYTISUS Americanus arboreescens, fructu eduli albo.* Plum. Cat. American Tree-like Base-tree Trefoil, with a white eatable Fruit, commonly called the Pigeon Pea in America.

The first Sort is very common in the Nurseries about London; where it is sold with other flowering Shrubs, to intermix in planting Wilderness Quarters. This may be easily propagated by the Seeds, which it produces every Year, in great Plenty; which should be sown on a Bed of light Earth in March, and a little Earth sifted over the Seeds, so as to cover them about half an Inch. In the Beginning of May the Plants will begin to appear, when they should be carefully cleared from Weeds, and in very dry Weather they must be refreshed with Water. In this Bed the Plants may remain till the following Spring, always observing to keep them clear from Weeds; which, if suffered to overbear the Plants while young, will either totally destroy them, or very much retard their Growth. The Spring following they may be transplanted out into Beds of fresh Earth the Beginning of March, placing them about a Foot asunder; being careful that the Plants are not kept above Ground, but planted as soon as they are taken up; otherwise the Fibres of the Roots will soon dry, which is very prejudicial to young Plants. In these Beds they may remain two Years; after which time they should either be planted out where they are to remain, or else transplanted into a Nursery, placing them in Rows three Feet asunder, and eighteen Inches Distance in the Rows; where they may continue until the Ground is ready where they are designed to remain. This Plant is very hardy, and will form a handsome Shrub about five or six Feet high, and is very proper to place amongst flowering Shrubs of the same Growth. It flowers plentifully in June, and the Seeds are ripe in August.

The second, third, and fourth Sorts are somewhat tenderer than the former, and will not abide the open Air in England in severe Winters. These may be all propagated by sowing of their Seeds on a moderate Hot-bed in the Spring; and when the Plants are come up, they should be transplanted each into a separate Half-penny Pot, filled with fresh Earth, and plunged in a moderate Hot-bed, observing to water and shade them until they take Root; after which they must be inured to the open Air by degrees; and in June, the Pots should be removed and placed abroad in a Situation where they may be defended from strong Winds, where they may remain until the Middle of October; when they should be removed either into an airy Green-house, or placed under a common Hot-bed Frame; where they should have as much free Air as possible in Winter, for they only require to be defended from hard Frosts; and if they have not much Air, they will draw very weak, and become tender and unsightly. These Plants should be removed into larger Pots the Spring following; and so from Year to Year, as they increase in Size, they should have

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larger Pots: in Summer they must be kept as long abroad as the Season will permit, and in Winter should have as much Air as possible in mild Weather; with which Management they will thrive, and produce great Plenty of Flowers. When these Plants are become woody, they may be shaken out of the Pots, and planted in the open Air in a warm Situation, where they will endure the Cold of our ordinary Winters very well, and flower and produce ripe Seeds every Year, much better than those which are confined in Pots: but it will be proper to keep one Plant of each Kind in Pots, because a very severe Winter may destroy those which stand abroad; so their Kinds may be lost, unless there is one of each Kind preserved by sheltering of them in Winter.

The thirteen Sorts next following of these, are some of them more tender than the four last mentioned; so that there will be a Necessity of preserving some of them in Pots, that they may be sheltered in Winter. All these Sorts may be propagated in the same Manner as the former.

The 18th, 19th, 20th, 21st, 22d, 23d and 24th Sorts, are less common than the former; these grow in the Islands of the *Archipelago*, from whence their Seeds may be procured: these Seeds should be sown in the Spring, on a very moderate Hot-bed; and when the Plants are come up, they should be carefully transplanted, each into a separate small Pot, filled with fresh light Earth; then place them where they may be sheltered from the Sun until they have taken new Roots, after which time they may be removed into a warm Situation, where they may be defended from strong Winds, observing to water them constantly in dry Weather. In Winter these Plants should be placed under a Hot-bed Frame, where they may be sheltered from Frost, but they should be every Day exposed to the open Air in mild Weather; for they are hardy enough to bear the open Air of this Country, except in very cold Weather; and if they are kept too tender, they will draw up very weak, so that they will not produce their Flowers.

The following Spring, some of these Plants should be shaken out of the Pots, and planted in a warm Situation in the full Ground; where they will thrive very well, and produce their Flowers every Spring, and some of them will perfect their Seeds; but it will be proper to preserve a Plant or two of each Kind in Pots, that may be sheltered in Winter; because those abroad may be destroyed by severe Frost. These Plants make a fine Diversity amongst flowering Shrubs of a middling Growth; so that they deserve a Place in every good Garden.

The two *African* Sorts are yet tenderer than either of the former; these will not bear the open Air of our Country in Winter, so must be constantly preserved in Pots, and removed into the Green-house in Winter, where they should be placed so as to enjoy as much free Air as possible in mild Weather; otherwise they will shoot very weak, and become unsightly; nor will they produce their Flowers in near so great Plenty, as when they

they are exposed to Air as much as possible in mild Weather.

These Sorts are propagated by Seeds, which should be sown early in the Spring, in Pots filled with light fresh Earth, which should be plunged into a Hot-bed of Tanners-bark, observing to water them gently as the Earth may require. When the Plants are come up two Inches high, they should be carefully transplanted, each into a separate small Pot, which should be plunged into a moderate Hot-bed; observing to screen them from the Sun until they have taken new Roots; after which time the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants; and they must be duly watered three or four times a Week in warm Weather. By the Beginning of *June*, these Plants will have acquired some Strength; then they should be inured to bear the open Air by degrees; and toward the End of *June*, if the Season proves warm, the Plants should be removed out of the Hot-bed, and placed in a warm Situation, where they may remain until *October*; when they must be removed into Shelter, placing them near the Windows of the Greenhouse, that they may enjoy a large Share of Air. During the Winter Season, these Plants must be frequently watered, but they must not have too much given them at a Time, lest it rot the Fibres of their Roots. In Summer they must be exposed again, with other exotic Plants, in a sheltered Situation, where they may be defended from strong Winds; and as the Plants increase in Size, so they must be put into larger Pots; but they must not be allowed Pots too large, for in these they will not thrive.

The 27th and 28th Sorts are yet more tender than the last mentioned; these being Natives of the warm Parts of *America*, will not live in this Climate, unless they are preserved in the warmest Stoves. They are propagated by Seeds, which should be sown early in the Spring, in Pots filled with rich light Earth, and plunged into a Hot-bed of Tanners-bark. When the Plants are come up about three Inches high, they should be each transplanted into a small Pot, filled with light fresh Earth, and plunged again into the Hot-bed, observing to shade them until they have taken Root again; then in warm Weather, the Glasses of the Hot-bed should be raised every Day to admit fresh Air, in proportion to the Warmth of the Season; and they must be frequently watered in hot Weather. These Plants may remain in the Hot-bed during the Summer Season, but in Autumn they must be removed into the Stove, and plunged into the Bark-bed; where if they are duly watered, and the Stove kept to a temperate Heat, they will thrive exceeding well. These Plants will not live in the open Air in this Country at any Season of the Year, so they should always remain in the Stove, being careful to admit fresh Air to the Plants in warm Weather, by opening the Glasses of the Stove; and as the Plants advance, so they should be removed into larger Pots: with this Management, the Plants will

continue many Years, and produce their Flowers, which will afford an agreeable Variety amongst other Plants of the same Country.

The twenty-ninth Sort is preserved as a Curiosity in *Europe*, but in the *West Indies* it is frequently planted by the Sides of Allies in Gardens, to form a Hedge, where they will last many Years without decaying; and will thrive on barren Land, which has been worn out, where scarcely any other Plant will prosper. It produces great Quantities of Fruit, which are sometimes eaten by the Inhabitants; but their chief Use is to feed Pigeons, from whence this Plant had its Name. The Branches, with the ripe Pease and Leaves, are given to Hogs, Horses, and most other Cattle, which fattens them very much.

In *England* it is preserved by some curious Persons in the Stove, being too tender to live through the Winter in this Climate without artificial Warmth. This Plant may be propagated by sowing of the Seeds on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a Half-penny Pot, filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which time they should have a large Share of fresh Air admitted to them in warm Weather, and must be frequently refreshed with Water: when the Plants have filled these Pots with their Roots, they should be shifted into larger, and plunged into the Hot-bed again, treating them as before: in this Bed they may remain till they are too tall to stand under the Glasses, when they should be removed into the Stove, and plunged into the Bark-bed; where during the Winter Season they should have a moderate Heat, and be frequently watered. The Spring following they will produce Flowers, and if they are preserved in the Stove, will perfect their Fruit in Summer.



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DALECHAMPIA.

This Plant was so named by Father PLUMIER, in Honour to the Memory of JACOBUS DALECHAMP, who was a curious Botanist.

The Characters are;

It hath Male and Female Flowers on the same Plant, which are contained in a many-leav'd prickly Cup; the Female Flowers, with the Embryo's, have two trifid Leaves; the Male Flowers consist of a great Number of Stamina, which are loaded with Farina: the Embryo afterward becomes a Fruit, which is divided into three Parts, each containing one roundish Seed.

We have but one Sort of this Plant, which is;

DALECHAMPIA scandens, lupuli foliis, fructu tricocco glabro, calyce hispido. Houst. Clim-

Climbing *Dalechampia*, with Leaves like Hops, a smooth three-seeded Fruit, and a prickly Cup.

This Plant is a Native of the warm Parts of *America*; it was discovered by Father *Plumier* in *Martinico*; but either he has mistaken in his Description of the Fruit, or his Kind is different from that which the late Dr. *Houftoun* observed in several Places in the *Spanish West Indies*; for Father *Plumier* describes the Fruit to be prickly, in the Sort which he saw; whereas that of Dr. *Houftoun* has smooth Fruit inclosed in a prickly Cup.

This Plant is propagated by Seeds, which must be sown early in the Spring on a Hot-bed; and when the Plants are come up three Inches high, they should be carefully transplanted, each into a separate small Pot, filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark; being careful to screen them from the Sun, until they have taken new Root; after which time, the Glasses of the Hot-bed should be raised every Day, in proportion to the Heat of the Weather, to admit fresh Air to the Plants: they must also be frequently watered, for they naturally grow in moist Places. When the Plants have grown so large as to fill these Pots with their Roots, they should be removed into larger Pots, and placed in the Bark-bed in the Stove; where they must be supported either with Stakes, or a Trellace, round which they will twine, and rise to the Height of eight or ten Feet.

These Plants must be kept constantly in the Stove, for they are too tender to bear the open Air in this Country, even in the summer Season. Therefore they should be placed with *Convolvulus*'s, and other twining Plants, near the Back of the Stove, where should be made an Espalier to support them; in which Situation they will thrive and produce their Flowers, and sometimes will perfect their Seeds in this Country. But in order to this, they should have a large Share of free Air in warm Weather, by drawing down the upper Glasses of the Stove; but in Winter the Stove should be kept to a temperate Heat, or rather higher. In Summer they will require a large Share of Water, but in Winter it should be given to them in less Quantities, but must be frequently repeated. These Plants do not continue above two or three Years; so that young Plants should be raised in order to preserve the Kind.

DAMASONIUM, Star-headed Water-plantain.

The Characters are;

It hath a Flower composed of three Leaves, which are placed orbicularly, and expand in Form of a Rose; out of the Flower-cup rises the Pointal, which afterward becomes a star-shaped Fruit, with many Cells, which are full of oblong Seeds.

The Species are;

1. **DAMASONIUM stellatum**. *Lugd.* Star-headed Water-plantain.

2. **DAMASONIUM Americanum maximum**, *plantaginis folio, flore flavescente, fructu globoso.* *Plum.* Greatest American Water-plantain, with a Plantain-leaf, a yellowish Flower, and a globular Fruit.

The first of these Plants is a Native of *England*, it grows commonly in standing Waters, which are not very deep. It is sometimes used in Medicine, but never cultivated in Gardens; so must be gathered for Use in the Places of its Growth.

The second Sort grows in *Jamaica*, *Barbados*, and several other Places in the warm Parts of *America*, where it is generally found in stagnating Waters, and other swampy Places: so that it would be difficult to preserve this Plant in *England*; for it will not live in the open Air, and requires a Bog to make it thrive. But as it is a Plant of no great Beauty or Use, so it is not worth the Trouble of cultivating in this Country.

DENTARIA, Tooth-wort.

The Characters are;

It hath a Flower consisting of four Leaves, which expand in Form of a Cross; out of whose Flower-Cup rises the Pointal, which afterward becomes a Fruit or Pod, which is divided into two Cells, by an intermediate Partition, to which the Valves adhere on both Sides; and is furnished with roundish Seeds. To these Marks should be added, the Valves, when ripe, twist up like a Screw, and discharge the Seeds with Violence; and the Roots are fleshy, scaly, and cut in, as it were, with Teeth.

The Species are;

1. **DENTARIA heptaphyllos**. *C. B. P.* Seven-leav'd Tooth-wort.

2. **DENTARIA pentaphyllos**, *foliis mollioribus.* *C. B. P.* Five-leav'd Tooth-wort, with soft Leaves.

3. **DENTARIA pentaphyllos**, *foliis asperis.* *C. B. P.* Five-leav'd Tooth-wort, with rough Leaves.

4. **DENTARIA heptaphyllos baccifera**. *C. B. P.* Seven-leav'd berry-bearing Tooth-wort.

5. **DENTARIA triphyllos**. *C. B. P.* Three-leav'd Tooth-wort.

6. **DENTARIA enneaphyllos**, *Montis Aurei.* *H. R. Par.* Nine-leav'd Tooth-wort of Mount d'Or.

These Plants grow on the Mountains in *Italy*, and in the Woods of *Austria*: the first Sort is found wild in Woods in some Parts of *England*, but the other Sorts are very rare in the *English* Gardens. These Plants are propagated by Seeds, or parting of their Roots; the Seeds should be sown in the Autumn, soon after they are ripe, in a light sandy Soil, and a shady Situation; in the Spring the Plants may be taken up where they grow too close, and transplanted out in the like Soil and Situation; where, after they have taken Root, they will require no farther Care, but to keep them clear from Weeds; the second Year they will produce Flowers, and sometimes will perfect their Seeds.

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The best Season for taking up the old Roots to transplant them, is at *Michaelmas*, when the Leaves are decayed; at which time they may be parted to increase them. These Plants are proper to plant in dry Wildernesses, under the Shade of Trees; for their natural Places of Growth are in Woods, and on the Sides of Banks, under close Cover of Trees.

DENTILLARIA. *Vide Fraxinella.*

DIERVILLA. [*This Plant was so named by Dr. Tournefort, from Mr. DIERVILLE a Surgeon, who brought it from ACADIA.*] We have no English Name for this Plant.

The Characters are;

It hath a Flower consisting of one Leaf, which is tubulous, and divided into five Parts: the Ovary, which crowns the Pointal, is produced from the Centre of the Two-leav'd Calyx; and after the Flower is passed, it becomes a pyramidal Fruit divided into four Cells, which are filled with small Seeds.

We have but one Species of this Plant at present in Europe, which is;

DIERVILLA Acadiensis fruticosa, flore luteo. Acad. Reg. Scien. Shrubby Diervilla of Acadia, with a yellow Flower.

This is a very low Shrub, seldom rising to the Height of three Feet in England; but is very subject to spread at the Root, and become bushy. The Flowers are small, and produced sparsely on the Branches, so that it doth not make any good Appearance in a Garden; but as it is pretty hardy, so it may be admitted as an Under-shrub, to fill up Vacancies in Wilderness Quarters, where it will add to the Variety. It is easily propagated from Suckers, which it generally produces in great Plenty from the Root, or by laying down the Branches. It requires a Soil not too hot and dry, nor over wet, but of a middling Nature.

DIOSCOREA. [*This Plant was so named by Father Plumier, from PEDAGIUS DIOSCORIDIS, a famous Physician.*] We have no English Name for this Plant.

The Characters are;

It hath a spreading bell-shap'd Flower, consisting of one Leaf, which is divided at the Extremity into several Parts; from whose Cup arises the Pointal, which afterward becomes a triangular Fruit, divided into three Cells; in which are contained orbicular Seeds, which are bordered.

The Species are;

1. *DIOSCOREA scandens, foliis tamni, fructu racemoso. Plum. Nov. Gen.* Climbing Dioscorea, with Black-briony Leaves, and the Fruit growing in Clusters.

2. *DIOSCOREA scandens, folio hastato, fructu racemoso. Houst.* Climbing Dioscorea, with a spear-shap'd Leaf, and clustered Fruit.

3. *DIOSCOREA scandens, folio subrotundo acuminato, fructu racemoso. Houst.* Climbing Dioscorea, with a roundish Leaf ending in a Point, and clustered Fruit.

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These Plants, all of them, grow wild in America; the first and third Sorts were found in great Plenty in the woody Parts of *Jamaica*, by the late Dr. *Houftoun*; but the second Sort he found at *Carthagera*, from whence he sent Seeds of this Plant to England. They generally grow under Trees or Hedges, and twist up the Stems of whatever Plants grow near them.

In Europe these Plants are preserved in some curious botanic Gardens, for Variety; but they have no great Beauty, so are seldom admitted into other Gardens. They may be propagated by sowing of their Seeds on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a small Pot, filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root; after which time, they should have a large Share of fresh Air admitted to them in warm Weather, and must be frequently watered. In this Bed the Plants may remain till Autumn, when they should be removed into the Bark-stove, and plunged into the Tan, under the other Plants; for these die to the Root every Winter, and rise again in the Spring; so that the Roots must not be over watered, when the Plant is quite decayed to the Ground. These Roots will abide several Years, provided they are thus managed, and in three Years after sowing will flower in England.

DODARTIA. [*This Plant was so named by Dr. Tournefort, from Monsieur DODART, a Member of the Academy of Sciences at Paris.*] We have no English Name for this Plant.

The Characters are;

It hath a personated tubulous Flower, consisting of one Leaf, having two distinct Lips; the upper Lip is bifid, and the under one is divided into three Parts; from whose Calyx arises the Pointal, fixed like a Nail in the hinder Part of the Flower, and afterward becomes a roundish Fruit, divided into two Cells, which are filled with small Seeds.

The Species are;

1. *DODARTIA orientalis, flore purpurascens. Tourn. Cor.* Eastern Dodartia, with a purplish Flower.

2. *DODARTIA bellidis folio, flore albo spicato. Dodartia* with a Daisy-leaf, and white Flowers growing in a Spike.

These Plants may be propagated by sowing their Seeds on a Bed of fresh Earth in the Spring; and when the Plants are come up an Inch high, they should be transplanted, some into small Pots, and the others into warm Borders (for they require some Protection in Winter): those which are planted in Pots, should be placed under a Hot-bed Frame in Winter, where they may be covered in frosty Weather; but in mild Weather they should have as much free Air as possible, otherwise they will draw up very weak, and their Stems will rot off at Bottom in the Spring. The second Year after sowing, these Plants will flower, and ripen their

their Seeds, and very often decay soon after ; though, if the Plants are very sound, they will sometimes remain three or four Years.

DORSTENIA. [*This Plant was so named by Father Plumier, from Dr. Dorsten, a German Physician, who published a History of Plants in Folio*] *Contrayerva*.

The Characters are ;

It hath a thick fleshy Placenta, which is flat, and situated vertically ; upon which are placed many apetalous Flowers, which are succeeded by roundish Seeds, somewhat like those of *Gromewell*.

The Species are ;

1. *DORSTENIA dentariae radice, spondylii folio, placenta ovali.* Houst. *Contrayerva*, with a Tooth-wort Root, Cow-parship Leaf, and an oval Placenta.

2. *DORSTENIA dentariae radice, folio minus laciniato, placenta quadrangulati & undulata.* Houst. *Contrayerva*, with a Tooth-wort Root, less jagged Leaf, and a quadrangular undulated Placenta.

3. *DORSTENIA spondylii folio serrato, placenta quadrangulati, radice dentariae.* *Contrayerva*, with a Tooth-wort Root, sawed Cow-parship Leaf, and a quadrangular Placenta.

The first of these Plants was discovered by my late ingenious Friend Dr. *William Houstoun*, near *Old Vera Cruz* in *New Spain*. The second was found by the same Gentleman, on the rocky Grounds about *Campechy*. The third Sort was found in great Plenty in the Island of *Tobago*, by Mr. *Robert Millar*, Surgeon. But the Roots of all these Species are indifferently brought over and used in Medicine, and for Dying.

These Plants are at present very rare in *Europe*, nor was it known what the Plant was whose Roots were imported, and had been long used in Medicine in *England*, until the late Dr. *Houstoun* informed us ; for although Father *Plumier* had discovered one Species of this Plant, and given the Name of *Dorstenia* to the Genus, yet he seems not to have known, that the *Contrayerva* was the Root of that Plant.

It will be difficult to obtain these Plants, because the Seeds are seldom to be found good ; nor will they grow if they are kept long out of the Ground ; so that the only sure Method to obtain them, is to have the Roots taken up at the Time when their Leaves begin to decay, and planted pretty close in Boxes of Earth, which may be brought very safe to *England* ; provided they are preserved from Salt-water, and are not over-watered with fresh Water in their Passage ; when the Plants arrive they should be transplanted each into a separate Pot, filled with fresh Earth, and plunged into the Bark-stove, which should be kept to a moderate Heat, and the Plants must be frequently refreshed with Water during the Summer Season, but in Winter, when the Leaves are decayed, it should be given to them more sparingly : with this Management these Plants may not only be maintained, but may be also increased by parting their Roots

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in the Spring, before the Plants put out their Leaves.

DOUGLASSIA.

This Plant was so named by the late Dr. WILLIAM HOUSTOUN, in Honour to Dr. JAMES DOUGLASS, an eminent Physician at London.

The Characters are ;

It hath an anomalous Flower, consisting of one Leaf, whose lower Part is tubulous, but the upper Part is expanded, and divided into five Segments ; the Fruit, which is roundish, is divided into two Parts, which contain two Seeds.

There is but one Sort of this Plant at present known, viz.

1. *DOUGLASSIA frutescens & spinosa, ligustri folio, flore albo.* Houst. *Paliuro affinis ligustrifolia spinosa, flore monopetalo difformi, fructu sicco subrotundo.* Sloan. Cat. Jam. Shrub by prickly *Douglassia*, with a privet Leaf, and a white Flower.

This Shrub grows in great Plenty in the Woods and Savannas in *Jamaica* and *Barbadoes* ; where it rises to the Height of ten or twelve Feet, and spreads into many Branches, at the Extremity whereof there are sent forth Clusters of white Flowers, which are succeeded by roundish Fruit.

It may be propagated by Seeds, which must be obtained from the Countries of its Growth, for it doth not produce Seeds in this Country : this Seed must be sown in Pots filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark, observing to water the Pots frequently to keep the Earth moist, otherwise the Seeds will not vegetate ; in about a Month after sowing (if the Seeds are fresh) the Plants will appear above Ground, when they must be carefully watered three times a Week, provided the Bed is warm ; and in the Day-time, when the Sun is warm, the Glasses of the Hot-bed should be raised a little with Stones, to admit fresh Air to the Plants, as also to give Vent for the Steam of the Bed to pass off : with this Management the Plants will be fit to transplant in about three Weeks or a Month's time after their Appearance above Ground ; when they should be carefully shaken out of the Pots, and separated, being cautious how you part their Fibres, not to tear them ; then plant each into a separate small Pot filled with light rich Earth, and plunged into the Hot-bed again, being careful to shade the Plants until they have taken Root ; after which time they must be duly watered, and the Glasses of the Hot-bed must be raised every Day, in proportion to the Warmth of the Season, to admit fresh Air to the Plants, that they may increase in Strength, in proportion to their growing in Height. These Plants may remain in the Hot-bed until *Michaelmas* (provided there is Room for them to stand without touching of the Glasses) ; then the Plants should be removed into the Stove, and plunged into the Bark-bed, for the Winter Season. In the Winter these Plants must be frequently watered, but there should not be too much given to them at each time ; but in Summer they will require to be more plentifully

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fully watered. These Plants being Natives of warm Countries, will not thrive, if they are exposed to the open Air in this Country; so that they should be constantly kept in the Stove, being careful to give them a large Share of Air in Summer, when the Weather is warm. With this Management the Plants will make good Progress; and in two or three Years will begin to produce their Flowers, and will continue several Years to flower; but they never produce ripe Seeds in this Country. This Plant continues green throughout the Year, so will afford an agreeable Variety in the Stove, among other tender exotic Plants of the same Country.

DRACOCEPHALON, of *δράκων* a Dragon, and *κεφαλή* a Head, i. e. Dragon's-head.

The Characters are;

It hath a labiated Flower consisting of one Leaf, whose upper Lip, which is Crested, and its under Lip, which is divided into three Segments, end in Chops or Faws, and have the Representation of a Dragon's Head: out of the Flower-cup rises the Pointal, fixed like a Nail in the binder Part of the Flower; and is accompanied by four Embryos, which become so many Seeds, shut up in the Flower-cup.

There is but one Species of this Plant, viz.

DRACOCEPHALON Americanum. Breyn. prod. American Dragon's-head.

This Plant hath been ranged amongst the Foxgloves by several botanic Writers; but tho', from the Shape of the Flower, it seems to have some Affinity to that Genus; yet by the Flowers growing in Whorles round the Stalks, and each Flower being succeeded by four naked Seeds, it plainly belongs to the verticillate Tribe. This is propagated by parting of the Roots in the Spring (for it seldom produces good Seeds in England); these should be planted in Pots, filled with fresh rich Earth, and during the summer Season they should be exposed in a Place where they may be sheltered from strong Winds; and they must be constantly watered in dry Weather, otherwise they will not flower strong. In July these Plants will produce long Spikes of beautiful purple Flowers, and sometimes in a good Season they will produce Seeds. In Autumn these Plants die to the Ground, when the Pots should be placed under a Hot-bed Frame, where they may be sheltered from severe Frost in Winter; but in mild Weather they should have as much free Air as possible. In March these Plants may be taken out of the Frame, when they should be new potted, and the Roots parted, to increase them; but this should be done before the Plants begin to shoot up.

DRACUNCULUS, Dragon.

The Species omitted in the former Volume are;

1. **DRACUNCULUS Canadensis triphyllus pumilus**. Tourn. Dwarf Canady Dragon, with three Leaves.

2. **DRACUNCULUS Indicus, folio trifido**. Tourn. Indian Dragon, with a trifid Leaf.

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3. **DRACUNCULUS Indicus, folio quinquifido**. Tourn. Indian Dragon, with a quinquifid Leaf.

4. **DRACUNCULUS Americanus, colocasiae foliis laciniatis**. Tourn. American Dragon, with a jagged colocasia Leaf.

5. **DRACUNCULUS Americanus scandens, triphyllus & auritus**. Tourn. Climbing American Dragon with three Leaves, which have Ears to them.

6. **DRACUNCULUS polyphyllus major Indicus serotinus, immaculato caule**. Tourn. Greater many-leav'd late Indian Dragon, with an unspotted Stalk.

7. **DRACUNCULUS Zeylanicus polyphyllus, caule aspero ex flavo & viridi variegato**. Tourn. Many-leav'd Dragon of Ceylon, with a rough Stalk, variegated with Yellow and Green.

8. **DRACUNCULUS Zeylanicus spinosus, polypodii foliis, radice repente**. Tourn. Prickly Dragon of Ceylon, with polypody Leaves, and a creeping Root.

9. **DRACUNCULUS Americanus, caule aspero puniceo, radice cyclaminis**. Tourn. American Dragon, with a rough scarlet Stalk, and a Root like that of Sowbread.

10. **DRACUNCULUS Americanus scandens**. Tourn. Climbing American Dragon.

11. **DRACUNCULUS Zeylanicus polyphyllus, caule aspero virescente, maculis albicantibus notato**. Tourn. Many-leav'd Dragon of Ceylon, with a rough green Stalk, mark'd with whitish Spots.

All these Sorts of Dragon are very tender Plants (except the Dwarf Canady Kind); so will not live in this Country, unless they are preserved in the warmest Stoves: the several American Sorts grow naturally in the Woods in Jamaica, and other hot Parts of America: the climbing Sorts twist themselves round the Trunks of Trees, into which they fasten their Roots, which are sent forth from their Joints; and rise to the Height of thirty or forty Feet. These climbing Sorts are easily propagated by Cuttings, which being very succulent, may be brought over to England in a Box of dry Hay, if they are packed up separate, so as not to injure each other by the Moisture, which is apt to flow out at the Part where they are cut off; which may occasion a Fermentation, and thereby rot the Cuttings. When the Cuttings arrive, they should be planted in small Pots, filled with light fresh Earth, and plunged into a Hot-bed of Tan-ners-bark; being very careful not to let them have too much Moisture until they have taken Root, lest it rot them: when they have taken Root, they must be frequently refreshed with Water, but it must not be given to them in large Quantities; when the Weather is warm, the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants; and when they are grown pretty large, they should be placed in the Bark-bed in the Stove, where they must be placed near some strong Plants, to which they may fasten themselves, otherwise they will not thrive; for though they will send forth Roots at their Joints, which will fasten to the Mortar of the Stove, when

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when placed against the Wall; yet they will not thrive near so well as against a strong Plant, which will afford them Nourishment.

The other Sorts are propagated by Off-sets from their Roots; these may be procured from the Countries of their Growth, and should be planted in Tubs of Earth about a Month before they are put on board the Ship to transport them. These Tubs should be placed in a shady Situation, until they have taken Root; but they should not have much Water given to them, lest it rot them. In their Passage, great Care should be had to keep them from Salt-water, as also not to let them have too much Water given them; for if they have a little Water once or twice a Week at most, while they are in a hot Climate, and when they come into a cooler Climate, once in a Fortnight will be sufficient to water them; and this should be done sparingly, lest it rot them: for if the Tops of the Plants should decay in their Passage, if the Roots are not rotted, they will soon recover with proper Care.

When the Plants arrive, they should be transplanted into Pots, filled with light fresh Earth, and plunged into a Hot-bed of Tan-ners-bark, and gently watered, until they have taken good Root; after which time they will require to be frequently refreshed with Water; but as their Stems are very succulent, so they must not have too much Moisture, for that will rot them. These Plants should be constantly kept in the Stove, where in hot Weather they should have fresh Air admitted to them; but in Winter they must be kept very warm, otherwise they cannot be preserved in this Country.

These Plants will rise to the Height of three, four, or five Feet, and will afford a very agreeable Variety amongst other tender exotic Plants in the Stove.

The Dwarf *Canady* Sort, is pretty hardy, and will endure the Cold of our ordinary Winters in the open Air, provided they are planted in a warm Soil and Situation: if they are planted under Trees, they will thrive much better than when placed in a more open Situation.

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ELÆAGNUS. [From *ἔλαια* an Olive, and *ἀγνός* *virex*; because this Plant hath Leaves like those of the Chaste-tree, and a Fruit like an Olive.] Oleaster, or Wild Olive.

The Characters are;

It hath a tubulous Flower, consisting of one Leaf, and cut into four Segments, whose Calyx afterward becomes a Fruit shaped like an Olive, inclosing a Stone of the same Form.

The Species are;

1. *ELÆAGNUS orientalis latifolius*, fructu maximo. Tourn. Cor. Eastern broad-leav'd Wild Olive, with a large Fruit.

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2. *ELÆAGNUS orientalis angustifolius*, fructu parvo, olivæformi subdulci. Tourn. Cor. Eastern Wild Olive, with narrow Leaves, and a small sweet olive-shaped Fruit.

3. *ELÆAGNUS orientalis angustifolius*, fructu minimo rotundiori & subacido. Tourn. Cor. Eastern narrow-leav'd Wild Olive, with a small roundish and acid Fruit.

4. *ELÆAGNUS non spinosa*, foliis angustis & longissimis, fructu parvo olivæformi. Wild Olive without Spines, narrow long Leaves, and a small olive-shaped Fruit.

The first and third Sorts Dr. *Tournefort* observed growing in several Islands of the *Archipelago*; the second Sort is found in great Plenty upon the Hills in *Spain*, *Italy*, and some Parts of *Germany*; the fourth Sort is the most common in the *English* Gardens, and hath been by most botanic Authors mentioned for the second Sort; tho' by comparing of them together, they appear very different; for the Leaves of the second are much shorter than those of the fourth; and the Branches are beset with sharp Thorns between the Leaves; whereas the fourth Sort hath no Spines on it: but where this is a Native, I cannot determine, tho' probably it was found with the second Sort in some of the Southern Parts of *Europe*.

These Plants may be propagated by laying down the young Shoots in Autumn, which will take Root in one Year, when they may be cut off from the old Trees, and either transplanted into a Nursery for two or three Years, to be trained up, or into the Places where they are to remain. The best Season for transplanting of these Trees, is in the latter End of *February*, or the Beginning of *March*, tho' they may be removed at *Michaelmas*, provided the Roots are mulched to protect them from severe Frost in Winter. These Plants should be placed where they may be protected from strong Winds; for they grow very freely, and are very subject to be split down by the Wind, if they are too much exposed.

These Trees commonly grow to eighteen or twenty Feet high; and when they are intermixed with other Trees of the same Growth, make a pretty Diversity; for the Leaves of these Trees are of a silver Colour, so are easily distinguished at a Distance. In *June* these Trees produce great Quantities of small yellowish Flowers of a very strong Scent, and sometimes they produce Fruit in *England*.

ELEPHANTOPUS. [Of *ἔλεας* an Elephant, and *πῦς* a Foot.] Elephant's-Foot; so called by Monsieur *Vaillant*; because, he says, the under Leaves of the first Sort somewhat resemble an Elephant's Foot.

The Characters are;

It hath a discous Flower, composed of several Florets which are hermaphrodite, contained in one Flower-cup, which is cut into several Segments almost to the Bottom; the Bottom of the Calyx is flat, and filled with Ovaries, which are beset on the Top with Hairs; the Disks are jointed

joined upon a common Placenta, and form a sort of Sheaf garnished with a Foliage.

The Species are;

1. ELEPHANTOPUS conyzæ folio. Vaill. Mem. Acad. Scien. 1719. Elephant's-Foot, with a fleabane Leaf.

2. ELEPHANTOPUS folio sinuato. Vaill. Mem. Acad. Scien. 1719. Elephant's-Foot with a sinuated Leaf.

3. ELEPHANTOPUS belenii folio, flore purpurascens. Elephant's-Foot, with an elecampane Leaf, and purplish Flowers.

The first Sort grows in great Plenty in South Carolina, where it is a very common Weed; for from the Earth in which some Plants were brought over from thence, I have frequently had this Plant come up as a Weed. The second and third Sorts are very common in Jamaica, and in several Parts of the Spanish West-Indies; from whence I have received Seeds and Specimens, which were collected by my late ingenious Friend Dr. William Houstoun.

These Plants are propagated by Seeds, which should be sown on a Hot-bed in the Spring; and when the Plants are come up, they must be transplanted into Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; then you should let them have a large Share of fresh Air in warm Weather, and give them plenty of Water: with this Management the first and second Sorts will flower in August, and if the Autumn proves favourable, will ripen their Seeds in October; but the Plants should be placed in a Stove after the Seeds are perfected, if you design to preserve them through the Winter.

The third Sort is hardier than either of the former, and may be preserved through the Winter in a Green-house, without any additional Heat; this Plant dies to the Root every Autumn, and rises again the following Spring; but it seldom flowers, unless the Season be very warm, or that the Plants are forwarded by a Hot-bed in the Spring. This Plant hath been long known in the European Gardens, under the Title of *Scabiosa Indica Bontii*.

ELEPHAS. This Plant was so named, from the Resemblance which the Flower has to an Elephant's Head.

The Characters are;

It hath an anomalous personated Flower, consisting of one Leaf, which hath two distinct Lips; the upper one resembles an Elephant's Trunk, but the under one is divided into several Parts; from whose Cup arises the Pointal, fixed like a Nail in the binder Part of the Flower, which afterward becomes a Fruit divided into two Cells, which contain many oblong Seeds.

The Species are;

1. ELEPHAS Italica, flore magno, proboscide surrecta. Tourn. Italian Elephas, with a large Flower, whose upper Lip or Trunk is erect.

2. ELEPHAS orientalis, flore parvo, proboscide surrecta. Tourn. Eastern Elephas, with a small Flower, whose upper Lip or Trunk is erect.

3. ELEPHAS orientalis, flore magno, proboscide incurva. Tourn. Eastern Elephas, with a large Flower, whose upper Lip or Trunk is bent downward.

The first Sort grows naturally in some Parts of Italy, from whence the Seeds have been procured by some curious Persons; but this Plant is very rare in England at present. The other two Sorts were discovered by Dr. Tournefort, in the Levant, who sent the Seeds to the Royal Garden at Paris; where the Plants were raised, and have since been distributed to several curious Persons in Europe.

These Plants may be propagated by Seeds, which should be sown on a Bed of light fresh Earth the Beginning of March; when the Plants begin to appear, they should be kept clear from Weeds; and in dry Weather they must be frequently watered, which will greatly promote their Growth. When the Plants are about two Inches high, they should be carefully taken out of the Bed, and transplanted, some of them into small Pots, filled with light fresh Earth, and the others into a Bed of fresh Earth in a warm Situation. These Plants must be screened from the Sun until they have taken Root; after which time they may be exposed to the open Air, observing to water them in dry Weather, as also to keep them clear from Weeds: when those Plants, which were planted in Pots, have grown so much as to fill the Pots with their Roots, they must be shaken out of them, and their Roots pared, and then put into Pots a little larger than the former; which must be filled with fresh Earth, and then placed in an open Situation, observing to water them duly in dry Weather. In this Place they may remain until the Beginning of November, when they should be removed and placed under a Hot-bed Frame, where they may be sheltered from severe Frost in Winter; but in mild Weather they should have as much free Air as possible; so that the Glasses of the Hot-bed must be taken off every Day when the Weather is good. In the Spring some of these Plants may be shaken out of the Pots, and planted in a warm Border, where they will thrive, and produce their Flowers, and sometimes will perfect their Seeds in this Country.

Those Plants which are planted in a Bed of good Earth, will require no other Culture but to keep them clear from Weeds, and in dry Weather they must be duly watered; but if the Winter should prove very severe, it will be proper to cover them with Mats or Pease-haulm, to protect them from the Frost; and in the Spring, the Plants may be taken up, and transplanted into the Borders of the Pleasure-garden, where they are designed to remain. As these Plants are in danger of being destroyed in very cold Winters, so it will be proper to keep two or three Plants of each Kind in Pots, which may be sheltered from severe Frost, in order to preserve the Species.

ELICHRYSUM, Goldylocks, Eternal Flower, or Golden Cassidony.

The Species omitted in the former Volume are;

1. *ELICHRYSUM angustifolium* *Tourn.* The most narrow-leav'd Golden Cassidony.

2. *ELICHRYSUM umbellatum maritimum Hispanicum. Tourn.* Spanish maritime umbellated Golden Cassidony.

3. *ELICHRYSUM seu Stachas citrina latifolia. C. B. P.* Broad-leav'd Golden Cassidony.

4. *ELICHRYSUM Germanicum, calyce ex auro rutilante. Tourn.* German Goldyllocks, with a reddish golden Empalement.

5. *ELICHRYSUM Germanicum, calyce sanguineo. Tourn.* German Goldyllocks, with a Blood-coloured Empalement.

6. *ELICHRYSUM angustifolium incanum, maximo flore. Tourn.* Hoary narrow-leav'd Golden Cassidony, with a large Flower.

7. *ELICHRYSUM lavendulae folio breviori, floribus conglobatis minime luteis. D. Sberard. Raii sup.* Golden Cassidony, with a shorter lavender Leaf, and conglobated Flowers, which are very little yellow.

8. *ELICHRYSUM latifolium Hispanicum, corymborum squamulis & floribus amplis sulphureis. Pluk. Almag.* Broad-leav'd Spanish Golden Cassidony, with large yellow Flowers.

9. *ELICHRYSUM latifolium villosum, alato caule, odoratissimum. Pluk. Phyt.* The most sweet-smelling hairy broad-leav'd Golden Cassidony, with a winged Stalk.

10. *ELICHRYSUM orientale, foliis amplioribus subrotundis. Tourn.* Eastern Golden Cassidony, with larger roundish Leaves.

11. *ELICHRYSUM orientali simile, calyce florum argenteo. Tourn.* Golden Cassidony resembling the Eastern one, with a silver Empalement.

12. *ELICHRYSUM orientale vernal angustifolium. Tourn.* Narrow-leav'd Eastern Spring Golden Cassidony.

13. *ELICHRYSUM orientale, leucii folio viridi. Tourn.* Eastern Golden Cassidony, with a green July-flower Leaf.

14. *ELICHRYSUM orientale glutinosum, lavendulae folio. Tourn.* Glutinous Eastern Golden Cassidony, with a Lavender Leaf.

15. *ELICHRYSUM Africanum, folio oblongo angusto, flore rubello postea auro. Boerb.* African Golden Cassidony, with a narrow oblong Leaf, and a red Flower turning to a Yellow.

16. *ELICHRYSUM Africanum lanuginosum latifolium, calyce floris argenteo & amplissimo. Oldenl.* Broad-leav'd woolly African Golden Cassidony, with a very large silver Empalement.

17. *ELICHRYSUM Africanum lanuginosum, angustissimo folio, calyce floris argenteo & amplissimo. Oldenl.* Woolly African Golden Cassidony, with a very narrow Leaf, and a large silver Empalement.

18. *ELICHRYSUM Africanum frutescens, coridis folio. Oldenl.* Shrubby African Goldyllocks, with a Coris Leaf.

19. *ELICHRYSUM Africanum incanum tomentosum, foliis subrotundis. Oldenl.* Woolly hoary African Goldyllocks, with roundish Leaves.

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20. *ELICHRYSUM Africanum umbellatum odoratum luteum. Oldenl.* Yellow sweet-smelling umbellated African Goldyllocks.

The first Sort here mentioned is very common in the English Gardens, and has been taken for the *Stachas citrina* of the Dispensatory, by many good Botanists, but is very different from it. This will rise to the Height of three Feet, and become shrubby; it is hardy, and may be easily propagated by planting Cuttings of it, in April, in a shady Border, observing to refresh them with Water, and keep them clear from Weeds. These Cuttings will have made good Roots in about two Months; when they may be taken up with a Ball of Earth to their Roots, and transplanted where they are designed to remain. These Plants may be kept in a regular Form, by pruning off their Side Branches, and supporting them with Stakes: but the Shoots must not be shortned in the Spring or Summer Months, for that will prevent their flowering.

The thirteen following Sorts are more rare in England than the first, and are of humbler Growth. These may be propagated by Slips, which should be planted in Pots, filled with light rich Earth, and then plunged into a very moderate Hot-bed of Tanners-bark; observing to screen them from the Sun until they have taken Root, when they should be inured to bear the open Air by degrees. In Summer these Plants should be placed abroad in a sheltered Situation, observing to water them duly in dry Weather: but in Winter they should be placed under a Hot-bed Frame, where they must have as much free Air as possible in mild Weather; for they are pretty hardy, and only require to be protected from severe Frost. The following Spring some of the Plants may be shaken out of the Pots, and planted in a warm Border near the Shelter of a Wall; where they will produce their Flowers, and may abide several Years, provided the Winters do not prove very severe. However, it will be proper to keep a Plant or two of each Kind in Pots, which may be sheltered in Winter; so that if those which were planted abroad should be destroyed, these may be preserved to maintain the Sorts.

The Six last-mentioned Kinds, are somewhat tenderer than the former; so require a little more Care to preserve them in Winter. These may be propagated by Cuttings, in the same manner as the former; which when rooted must be planted in Pots, filled with light fresh Earth, and placed in a shady Situation until they have taken new Root; after which time, they may be exposed with other hardy exotic Plants, in a warm Situation, where they may be defended from strong Winds; in which Place they may remain until the Middle of October, at which time they should be removed into an open airy Green-house; where they should have as much free Air as possible in mild Weather, to prevent their making long weak Shoots; which will not only render them unsightly, but also cause them to flower sparingly.

sparingly. These Plants require to be frequently watered in Winter, when the Weather is mild; which may soon be discovered by the hanging of their Leaves; but at this Season they must not have so large Quantities of Water as in Summer, for that will sometimes rot them.

Some of these Sorts may be trained up to the Height of three or four Feet, and if they are rightly managed, may be reduced to regular Heads; whereby they will become very ornamental in a good Garden: for as they continue to produce their Flowers through most of the summer Months, and many of them produce Flowers late in Autumn, which will continue in Beauty most part of the winter Season; so they afford an agreeable Variety at a Season when other Flowers are very scarce. Besides, the different Appearance which these Plants have from their hoary and woolly Leaves, make an agreeable Diversity amongst other Plants in the Green-house, when they are wholly divested of their Flowers.

The Flowers of all these Sorts of Plants, if they are gathered when in Perfection, and laid in a dry Place where they may be kept from Dust and Air, will continue fresh and in Beauty for several Years; so that from the several Varieties of these Flowers, a Basin or Flower-pot may be furnished in Winter, when few other Flowers can be procured, which will have a pretty Effect, in Rooms or Halls; but the Stalks of these Flowers must not be placed in Water, nor should any Moisture come to their Flowers, for that will decay them.

EPHEDRA, Shrubby Horse-tail, *vulgò*.

The Characters are;

It hath an apetalous Flower, consisting of many Stamina, which are for the most part barren, for the Embryos grow on different Parts of the same Plant, or on other Plants which have no conspicuous Flowers: these Embryos afterwards become soft Berries, in which are contained many oblong Seeds.

The Species are;

1. EPHEDRA *maritima major*. Tourn. Greater Sea Horse-tail.
2. EPHEDRA *maritima minor*. Tourn. Lesser Sea Horse-tail.
3. EPHEDRA *five Anabasis*. Bellon. Tourn. Climbing Sea Horse-tail.
4. EPHEDRA *Hispanica arborescens, tenuissimis & densissimis foliis*. Tourn. Spanish Tree-like Horse-tail, with narrow clustery Leaves.
5. EPHEDRA *Cretica, tenuioribus & rarioribus flagellis*. Tourn. Candy Horse-tail, with narrower and fewer Branches.
6. EPHEDRA *orientalis procerior, flagellis durioribus, & mediæ crassitie*. Tourn. Taller Eastern Horse-tail, with harder and thicker Branches.

The first of these Plants is pretty common in the English Gardens, but the others are at present pretty rare in this Country; and are only cultivated in botanic Gardens for the sake

of Variety, there being little Beauty in these Plants, nor are they used in Medicine.

They may be propagated by Off-sets, which they send forth in great Plenty; for they creep under Ground by their Roots, and send forth Suckers, which may be taken off to transplant in the Spring. They love a pretty moist strong Soil, and will endure the Cold of our ordinary Winters very well in the open Air. The first, fourth and sixth Sorts will rise to the Height of three or four Feet, provided their Roots are kept pretty clear from Suckers; otherwise they will spread very far, and send forth great plenty of Suckers, which will prevent their rising in Height. Some of these Plants were formerly preserved in Pots, and were housed in Winter, but by later Experience they are found to thrive better in the full Ground.

EUPATORIOPHALACRON, Naked-headed Hemp-agrimony.

The Characters are;

It is a corymbiferous Plant, which in some Species have radiated Flowers, whose Florets are hermaphrodite, and the Half-florets are Female; but in other Species the Flowers are produced in a Disk, and are for the most part hermaphrodite. The Ovaries have naked Heads, and are placed on a woolly Placenta; all these Parts are contained in a Flower-cup, which is divided into many Parts to the Placenta; to these Notes must be added, the Leaves growing opposite on the Branches.

The Species are;

1. EUPATORIOPHALACRON *balsaminæ fæminæ folio, flore albo discoide*. Vaill. Naked-headed Hemp-agrimony, with a female-balsam Leaf, and a white discous Flower.
2. EUPATORIOPHALACRON *menthæ arvensis folio*. Vaill. Naked-headed Hemp-agrimony, with a water-calaminth Leaf.
3. EUPATORIOPHALACRON *foliis angustis, rarius dentatis, flore radiato*. Vaill. Naked-headed Hemp-agrimony, with narrow indented Leaves, and a radiated Flower.
4. EUPATORIOPHALACRON *folio trinervi subrotundo, flore minore luteo radiato*. Vaill. Naked-headed Hemp-agrimony, with a roundish trinervated Leaf, and a smaller yellow radiated Flower.
5. EUPATORIOPHALACRON *folio trinervi subrotundo, flore majore luteo radiato*. Vaill. Naked-headed Hemp-agrimony, with a roundish trinervated Leaf, and a larger yellow radiated Flower.
6. EUPATORIOPHALACRON *persicæ folio trinervi, flore minimo luteo discoide*. Vaill. Naked-headed Hemp-agrimony, with a trinervated Peach-leaf, and the least yellow discous Flower.
7. EUPATORIOPHALACRON *scrophulariæ folio trinervi*. Vaill. Naked-headed Hemp-agrimony, with a trinervated Figwort Leaf.
8. EUPATORIOPHALACRON *scrophulariæ folio trinervi, caule alato*. Vaill. Naked-headed Hemp-agrimony, with a trinervated Figwort Leaf, and a winged Stalk.

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9. *EUPATORIOPHALACRON Indicum scrophulariæ folio, capitulo parvo radiis quinis ad basin ornato, hispido & glutinoso. Act. Phil.* Indian Naked-headed Hemp-agrimony, with a Figwort Leaf, and a small Head adorned with five Rays, which are prickly and glutinous.

10. *EUPATORIOPHALACRON Americanum procumbens, origani folio, flore luteo. Houst.* Trailing American Naked-headed Hemp-agrimony, with an origany Leaf, and a yellow Flower.

All these Plants are annual, so must be sown every Spring on a Hot-bed, and must be transplanted afterward to another, in order to bring them forward, otherwise they will not perfect their Seeds in this Country; for most of them are Natives of the warmer Parts of America, therefore they must be treated after the Manner of *Amaranthus*, bringing them forward on Hot-beds until June; about the Middle of which Month, they may be transplanted into Beds or Borders of rich Earth; where, if they are duly watered in dry Weather, they will produce their Flowers in July, and their Seeds will ripen in September. There is no great Beauty in these Plants, so they are seldom cultivated but in botanic Gardens for the sake of Variety.

EUPATORIUM; Water Hemp-agrimony.

The Species omitted in the former Volume are;

8. *EUPATORIUM scandens, foliis subrotundis lucidis, floribus spicatis albis. Houst.* Climbing Hemp-agrimony, with roundish shining Leaves, and white Flowers growing in a Spike.

9. *EUPATORIUM Americanum, teucrii folio, flore niveo. Vaill. Mem. Acad. Scien.* American Hemp-agrimony, with a tree-germander Leaf, and a white Flower.

10. *EUPATORIUM Virginianum, salviæ foliis longissimis acuminatis, perfoliatum. Pluk. Almag.* Virginian Hemp-agrimony, with long sage-like Leaves closely surrounding the Stalk.

11. *EUPATORIUM betonicæ folio glabro & carnosio, flore cæruleo. Houst.* Hemp-agrimony, with a fleshy smooth betony Leaf, and a blue Flower.

12. *EUPATORIUM Americanum arborescens, mori folio, floribus albicantibus. Houst.* Tree-like American Hemp-agrimony, with a Mulberry-leaf, and white Flowers.

13. *EUPATORIUM Americanum frutescens, balsaminæ luteæ foliis, nigris maculis punctatis. Houst.* American shrubby Hemp-agrimony, with yellow Balsamine Leaves spotted with black Marks.

14. *EUPATORIUM Peruvianum, folio subrotundo trinervi utrinque acuto, flore cæruleo. Vaill. Mem. Acad. Scien.* Peruvian Hemp-agrimony, with roundish Leaves ending in a sharp Point, and blue Flowers.

The eighth, eleventh, twelfth, thirteenth and fourteenth Sorts, are somewhat tenderer than the others mentioned in the former Volume, and require to be sheltered in Winter: the eighth Sort dies to the Root every Autumn, and rises again the following Spring. This

may be propagated by parting of the Roots in April, just before they begin to shoot; this Plant must be frequently watered in dry Weather, during the Season of its Growth; but in Winter, when the Stems are decayed, it should have but little Water; for too much Wet at that Season will rot the Roots.

The ninth, twelfth, thirteenth and fourteenth Sorts, may be propagated by Cuttings during the summer Season; which should be planted into Pots, filled with fresh light Earth, and plunged into a moderate Hot-bed, where they should be shaded and watered until they have taken Root, when they may be exposed to the open Air by degrees. These Plants may be placed in the open Air in Summer, among other hardy exotic Plants; but in Winter they should be placed in a good Greenhouse, observing to let them have the free Air in mild Weather; and they must be frequently refreshed with Water. With this Management these Plants will flower every Year, and may be allowed a Place in such Gardens where other exotic Plants are preserved.

EUPHRASIA, Eye-bright.

The Characters are;

It hath an anomalous personated Flower of one Leaf, divided into two Lips; the upper one upright and parted into several Divisions, and the lower one is divided into three Parts, each of which is again divided into two: out of the Flower-cup rises the Pointal, which afterwards turns to a Fruit or oblong Husk, divided into two Parts, and replete with small Seeds.

The Species are;

1. *EUPHRASIA officinarum. C. B. P.* Common Eye-bright.

2. *EUPHRASIA ramosa pratensis, flore albo. Hort. Eyst.* Branched Meadow Eye-bright, with a white Flower.

3. *EUPHRASIA minus ramosa, flore ex cæruleo-purpureo. Hort. Eyst.* Eye-bright less branched, with a purple blue Flower.

4. *EUPHRASIA Alpina parva, luteis floribus. C. B. P.* Small Mountain Eye-bright with yellow Flowers.

The first Sort is very common in the Meadows in most Part of England, where the Herb-women gather it to supply the Markets, it being very much used for Disorders of the Eyes. The other Sorts are not common in England, nor are they ever gathered for Use: they are all of them annual Plants, which drop their Seeds in the Places of their Growth, and rise again without any Culture. These Plants are difficult to keep in Gardens, for unless their Seeds are permitted to fall when ripe, and the Plants suffered to come up in the same Places, they seldom succeed; nor do their Seeds scarce ever grow, if they are kept out of the Ground till Spring; so that they must be sown soon after they are ripe. But as the only Sort which is used in Medicine grows plentifully in the Fields in this Country, so it is not cultivated in Gardens. The best Time to gather this Herb for Use, is in June, when it is in Flower.

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FAGONIA. *This Plant was so named by Dr. TOURNEFORT, in Honour to Dr. FAGON, who was Superintendant of the Royal Garden at Paris.*

The Characters are;

The Flower consists of many Leaves, which are placed orbicularly, and expand in Form of a Rose; out of whose Centre rises the Pointal, which afterward becomes a channelled round pointed Fruit, consisting of many Cells, and composed of many Husks, each containing one roundish Seed.

The Species are;

1. *FAGONIA Cretica spinosa.* Tourn. Thorny Trefoil of Candy.

2. *FAGONIA Hispanica non spinosa.* Tourn. Spanish Fagonia without Thorns.

The first of these Plants is peculiar to Crete, from whence it hath been brought by some curious Botanists, and is preserved in botanic Gardens. The other Sort was discovered by Dr. Tournefort, in Spain, who sent the Seeds to the Royal Garden at Paris; from whence it hath been distributed to several curious botanic Gardens.

These Plants may be propagated by Seeds, which should be sown in March, on a Border of light Earth, covering them about a quarter of an Inch with Earth; in April the Plants will appear above Ground, when they should be carefully weeded, and in dry Weather they must be frequently watered, which will greatly promote their Growth; toward the latter End of May the Plants will be strong enough to transplant, at which time they should be carefully taken up, and planted about six Inches asunder, in a Bed or Border of fresh light Earth, observing to shade them from the Sun until they have taken Root; after which time they must be kept clear from Weeds, and in dry Weather they should be refreshed with Water. In this Place the Plants may remain till Michaelmas, when they should be taken up with Balls of Earth to their Roots, and transplanted into the Borders where they are designed to remain; and the following Summer they will produce their Flowers, when they will add to the Variety amongst other hardy Plants.

FICOIDEA. [This Plant is so called from its Resemblance to the Ficoides.]

The Characters are;

It hath a staminate Flower, whose Calyx is divided into five roundish Segments: when the Flower is past, the Pointal (which is terminated by five Threads) becomes a five-cornered Fruit; which when ripe opens into five Cells, each of which is filled with small Seeds.

The Species are;

1. *FICOIDEA procumbens, portulacæ folio.* Acad. Reg. Scien. Trailing Ficoidea, with a purslain Leaf.

2. *FICOIDEA Hispanica annua, folio longiore.* Vaill. Annual Spanish Ficoidea, with a longer Leaf.

These two Plants are propagated by Seeds, which should be sown on a Hot-bed in the Spring; and when the Plants are come up, they should be each transplanted into a Half-penny Pot, and plunged into another moderate Hot-bed, observing to let them have Air in proportion to the Warmth of the Season; and they must be frequently refreshed with Water. Toward the End of June, they should be inured to bear the open Air by degrees; and in July they may be removed into the open Air, and placed amongst Ficoides's and other hardy succulent Plants, where they will flower, and produce ripe Seeds in Autumn.

FICOIDES, Fig-marygold.

To this Article add;

40. *FICOIDES Neapolitana, flore candido.* H. L. Neapolitan Ficoides, with a white Flower, commonly called Egyptian Kali.

41. *FICOIDES folio viridi triangulari tenuiore, flore luteo in extremitate rubente.* Schw. Cat. Fig-marygold, with a narrow green triangular Leaf, and a yellow Flower with red Tops.

42. *FICOIDES seu Ficus aizoides Africana, folio viridi, micis quasi glaciatis splendentibus ornato, flore coccineo.* Boerb. Ind. 1. African Ficoides with green Leaves, beset with shining glass-like Drops, and a scarlet Flower.

43. *FICOIDES Africana, folio calamiforme, flore flavescente.* African Ficoides, with a quill-shaped Leaf, and a yellowish Flower.

44. *FICOIDES Africana procumbens, foliis sempervivi congestis, flore candido.* African trailing Ficoides, with houseleek Leaves, and a white Flower.

45. *FICOIDES Africana procumbens, foliis sempervivi expansis, flore flavescente.* African trailing Ficoides, with an expanded houseleek Leaf, and a yellowish Flower.

The fortieth Kind is an annual Plant, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be transplanted each into a separate small Pot, filled with light sandy Earth, and plunged into a moderate Hot-bed of Tanners-bark; being careful to admit a large Share of Air to them in warm Weather, otherwise they will draw up weak. In July these Plants should be inured to bear the open Air by degrees, when they should be taken out of the Hot-bed, and placed in a warm Situation, where they will produce their Flowers; and if the Autumn proves favourable, will perfect their Seeds. This is the Egyptian Kali, or Glass-wort, whose Ashes is so useful in making of Glass and hard Soap.

The other Sorts are propagated by Cuttings, in the Manner directed in the former Volume of the Gardeners Dictionary.

FRAGARIA, Strawberry.

To this Article must be added;

1. *FRAGARIA fructu globoso majore suavissimo.* The Globe Hautboy Strawberry.

2. *FRAGARIA fructu parvo ex albo virescente.* Strawberry, with a small greenish white Fruit.

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The first of these Sorts is now much cultivated by most curious Persons near London, it being a more plentiful Bearer than the common *Hautboy*, and is a better tasted Fruit. In a kindly Season I have seen this Fruit as large as Walnuts, and of an extraordinary fine Flavour. This may be cultivated in the same Manner as the common *Hautboy* Strawberry, and must be planted at the same Distance.

The second Sort is a very firm Fruit, about the Size of the Wood Strawberry, or a little larger; this is greatly esteemed for the Firmness of the Fruit, and the quick agreeable Flavour; which some Persons have imagined to resemble the *Pine-apple*, and from thence have given it the Name of the *Pine-apple Strawberry*. This may be propagated in the same Manner as the Wood Strawberry, but should be every Autumn carefully divested of Suckers; otherwise they will grow very thick, and produce but little Fruit.

The *Chili* Strawberry, which is described in the former Volume of the *Gardeners Dictionary*, is now but little esteemed in England, the Fruit being ill-tasted. This Kind has produced Fruit of late Years in many Gardens; but in general the Fruit is not so large as those of the *Globe Hautboy Strawberry*, and is of a very irregular Form: this Sort produces more Fruit, where they grow neglected, and under Shade, than when they are planted in an open Situation, and are cultivated with great Care.

FRANGULA, Berry-bearing Alder.

To this Article must be added;

2. FRANGULA *rugosiore* & *ampliore folio*. Tourn. Berry-bearing Alder, with a larger and rougher Leaf.

3. FRANGULA *montana pumila saxatilis*, folio subrotundo. Tourn. Low Mountain rocky Berry-bearing Alder, with a round Leaf.

4. FRANGULA *montana pumila saxatilis*, folio oblongo. Tourn. Low Mountain rocky Berry-bearing Alder, with an oblong Leaf.

5. FRANGULA *sempervirens*, folio rigido subrotundo. Hort. Elth. Ever-green Berry-bearing Alder, with a round stiff Leaf, commonly called the *Hottentot Cherry*.

The second Sort is less common than the former in England, but may be propagated in the same Manner as hath been directed for that Sort, and requires a moist Situation; this is much like the former in its Growth, and may be admitted for Variety.

The third and fourth Sorts are of humble Growth, seldom rising above two Feet high; these grow on the *Pyrenean* Mountains, and are seldom preserved unless in botanic Gardens for Variety: they may be increased by laying down their Branches, but must have a strong Soil, somewhat drier than what has been directed for the two former.

The fifth Sort is a Native of *Africa*, and has been a long time preserved by the Curious in their Gardens, under the Title of *Cerasus Hottentotorum*, or *Hottentot Cherry*; but it having produced Flowers and Fruit in the Garden of Dr. James Sherard of *Eltham*, is figured and described by Dr. Dillenius, in the *Hor-*

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tus. Elthamensis, by the Name I have here given it. This Plant may be propagated by Cuttings, which should be the former Year's Shoots, and must be planted the latter End of April, in Pots filled with fresh rich Earth; which should be plunged into a moderate Hot-bed of Tanners-bark, being careful to shade the Glasses in the Heat of the Day, as also to refresh them often with Water; this must be duly observed, until the Cuttings have taken Root, which cannot be expected sooner than the Middle of July, when they must be inured to bear the open Air by degrees; and toward the End of the Month, they must be taken out of the Hot-bed, and placed in the open Air, in a warm Situation, where they may be screened from violent Winds; in this Place they may remain till the Beginning of October, when they must be removed into the Green-house, and placed in a warm Situation; and during the winter Season, they must be frequently refreshed with Water, but this must not be given to them in too large Quantities, while they continue in the House. In the Spring these Plants may be shaken out of the Pots, and separated, putting each into a small Pot filled with fresh rich Earth, and placed in a shady Situation, until they have taken new Root; after which time they may be exposed to the open Air, with *Myrtles*, *Oranges*, and other hardy exotic Plants, till Autumn, when they must be housed with those Trees. This Sort will grow to the Height of twelve or fourteen Feet, and may be trained up with a regular Stem; so that it deserves a Place in every curious Green-house; for their thick shining ever-green Leaves make a pleasing Variety amongst other hardy exotic Plants.

FRAXINELLA, White Dittany.

The Species omitted in the former Volume are;

1. FRAXINELLA *minor purpurea Belgarum*. H. R. Par. Small purple white Dittany of Holland.

2. FRAXINELLA *niveo flore*. Clus. Hist. White Dittany with Snow-white Flowers.

These two Sorts are at present more rare in England, than the two other Kinds described in the former Volume; but of late they have been procured by some curious Persons from abroad. These are as hardy as the other Sorts, and may be propagated in the same Manner; and as they produce very beautiful Flowers, so they add greatly to the Variety in the Flower-garden; and requiring but little Care to cultivate them, they deserve a Place in every good Garden.

FROST.

In the Year 1728, there was a remarkable Frost, which continued for some Months, and destroyed a great Number of Trees and Plants in several Parts of Europe; a brief Account of which may not be improper to be here inserted.

The Autumn began with cold North and East Winds, and early in November the Nights were generally frosty; tho' the Frost did not

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enter the Ground deeper than the Sun thaw'd the succeeding Days: but towards the End of *November*, the Winds blew extremely cold from the *North*; which was succeeded by a great Snow, which fell in such Quantities in one Night, as to break off large Arms, as also the Tops of many ever-green Trees, on which it lodged. After the Snow had fallen, it began to freeze again, the Wind continuing to blow from the *North*; the Days were dark and cloudy for some time, but afterwards it cleared up, and the Sun appeared almost every Day; which melted the Snow where exposed to it, whereby the Frost penetrated deeper into the Ground. It was observable, that during these clear Days, a great Mist or Vapour appeared in the Evenings, floating near the Surface of the Ground till the Cold of the Night came on, when it was suddenly condensed and disappeared. About the 8th of *December* the Nights were extremely cold, the Spirits in the *Thermometer* fell 18 Degrees below the freezing Point; and on the 10th of the same Month, the Frost was as severe as had been known in the Memory of Man; the Spirits in the *Thermometer* fell to 20 Degrees below the freezing Point. At this time vast Numbers of *Laurustinus's*, *Phillyrea's*, *Alaternus's*, *Rosemary*, *Arbutus*, and other ever-green Trees and Shrubs, began to suffer; especially such as had been trimmed up to Heads with naked Stems, or had been clipped late in the Autumn. At this time also there were great Numbers of large deciduous Trees dis-barked, by the Frost; as *Pear-trees*, *Plane-trees*, *Walnut-trees*, with many other Sorts; and it was chiefly on the *West* and *South-west* Side of the Trees, that the Bark came off.

About the Middle of *December* the Frost abated of its Intensity, and seemed to be at a Stand, till the 23d of the same Month, when the Wind blew extreme sharp and cold from the *East*, and the Frost increased again, continuing very sharp till the 28th Day, when it began to abate again, and seemed to be going off, the Wind changing to the *South*; but it did not continue long in this Point, before it changed to the *East* again, and the Frost returned, tho' it was not so violent as before.

Thus the Weather continued for the most part frosty, till the Middle of *March*, with a few Intervals of mild Weather, which brought forward some of the early Flowers; but the Cold returning, soon destroyed them; so that those Plants which usually flower in *January* and *February*, did not this Year appear till *March*; and before they were fully blown, were cut off by the Frost; of this Number were all the Spring *Crocus's*, *Hepatica's*, *Persian Iris's*, *Black Hellebore's*, *Mezereon's*, with some others.

The *Cauliflower-plants* which were planted out of the Beds into the open Ground, during the Intervals between the Frost, were most of them destroyed, or so much cut, that they lost most of their Leaves; the early *Beans* and *Pease* were most of them killed, and many Fruit and Forest Trees, which had been lately removed, were quite destroyed. The Loss

was very great to some curious Persons, who had been many Years endeavouring to naturalize great Numbers of exotic Trees and Shrubs, abundance of which were either totally killed, or destroyed to the Surface of the Ground: amongst this Number there were many Sorts destroyed, which had endured the open Air many Years, without receiving the least Injury from the Cold; such as *Passion-flowers*, *Cork-trees*, *Cistus's*, *Rosemary*, *Stachas*, *Sage*, *Mastick*, and some others. In some Places the young *Ash* and *Walnut-trees* were killed; but when the Frost went off, there appeared to have been much more Damage done in the Gardens, than there really was; which occasioned many People to dig up and destroy large Quantities of Trees and Shrubs, which they supposed were killed; whereas those who had more Patience, and suffered them to remain, fared better; for great Numbers of them shot out again, some from their Stems and Branches, and others from their Roots, the following Summer.

Nor was the Frost more severe in *England*, than in other Parts of *Europe*, but on the contrary, in comparison, favourable; for in the *Southern* Parts of *France*, the *Olives*, *Myrtles*, *Cistus's*, *Alaternus's*, and several other Trees and Shrubs, which grow there almost spontaneously, were either destroyed, or at least were killed to their Roots; and about *Paris*, and the *Northern* Parts of *France*, the Buds of their Fruit-trees were destroyed, although they remained closed; so that there were very few Blossoms which opened that Spring. The *Fig-trees* were in several Parts of *France* quite killed; and in *England*, their tender Branches were destroyed; so that there was very little Fruit on those Trees the following Summer, except where they were protected from the Frost.

In *Holland* the *Pines* and *Firs*, with several other Trees, which are Natives of cold Countries, were greatly injured by the Cold; and most of the Trees and Shrubs, which were brought from *Italy*, *Spain*, or the *South* Parts of *France*, which had been planted in the full Ground, in that Country, were intirely killed; tho' many other Sorts, which had been brought from *Virginia* and *Carolina*, escaped very well in the same Gardens. But the Person who suffered most in that Country, was the learned Dr. *Boerhaave*, who had been several Years endeavouring to naturalize as many exotic Trees and Shrubs as he could possibly obtain from the several Parts of the World; great Numbers of which were intirely destroyed by the Frost this Winter.

In some Parts of *Scotland* they not only lost many of their curious Flowers, Plants and Trees; but great Numbers of Sheep and other Cattle were buried under the Snow, where they perished; and many poor People, who went to look after their Cattle, were equal Sufferers with them, being buried in the Snow; which in some Places fell eight or nine Feet deep in one Night.

It has been observed by *Thermometers*, when that kind of hovering lambent Fog arises,

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arises, (either Mornings or Evenings) which frequently betokens fair Weather, that the Air, which in the preceding Day was much warmer, has upon the Absence of the Sun become many Degrees cooler than the Surface of the Earth; which being near 1500 times denser than the Air, cannot be so soon affected with the Alternacies of Heat and Cold; whence 'tis probable, that those Vapours which are raised by the Warmth of the Earth, are by the cooler Air soon condensed into a visible Form. The same Difference has been observed between the Coolness of the Air, and the Warmth of Water in a Pond, by putting a *Thermometer*, which hung all Night in the open Air in Summer-time, into the Water, just before the rising of the Sun, when the like Reek or Fog was rising on the Surface of the Water.

FUCHSIA. This Plant was so named by Father *Plumier*, who discovered it in *America*, in Honour to the Memory of *Leonard Fuchs*, a learned Botanist.

The Characters are;

It hath a funnel-shaped Flower consisting of one Leaf, and divided into several Parts at the Brim; whose Cup afterward becomes a roundish soft fleshy Fruit, which is divided into four Cells, which are full of roundish Seeds.

We have but one Sort of this Plant, viz.

FUCHSIA *triphylla*, flore coccineo. *Plum.* *Nov. Gen.* Three-leav'd Fuchsia, with a scarlet Flower.

This Plant is a Native in the warmest Parts of *America*; it was discovered by Father *Plumier*, in some of the French Islands in *America*, and was since found by the late Dr. *William Houstoun*, at *Carthagena* in *New Spain*; from whence he sent the Seeds into *England*.

This is propagated by Seeds, which must be sown in Pots filled with rich light Earth, and plunged into a Hot-bed of Tanners-bark, observing to moisten the Earth as often as it appears dry; and if the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats; but in the Day-time, when the Sun is warm, the Glasses should be raised with Stones, to let out the Steam which may arise in the Bed, and to admit fresh Air. In about a Month after the Seeds are sown, the Plants will begin to appear, when they should be carefully cleared from Weeds, and frequently refreshed with Water to promote their Growth; and when they are about two Inches high, they should be shaken out of the Pots, and separated carefully; then plant each into a separate small Pot, filled with light rich Earth, and plunge them again into a Hot-bed of Tanners-bark, being careful to screen them from the Sun, until they have taken new Root; after which time they must have fresh Air admitted to them every Day in proportion to the Warmth of the Season, and should be frequently watered. When the Plants have grown so as to fill the Pots with their Roots, they must be transplanted into larger Pots, and plunged into the Hot-bed again, being careful to water them; and if they hang their Leaves

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on removing, they should be screened from the Sun until they have taken new Root: as the Season advances, so the Glasses of the Hot-bed should be raised higher, to admit a greater Share of Air to the Plants, to prevent their drawing up weak; and when the Plants are grown so tall as to reach the Glasses, they should be removed into the Bark-stove, and plunged into the Tanners-bark. In Winter these Plants require to be kept very warm, and at that Season they must not have so much Water as in Summer, but it must be often repeated.

These Plants are too tender to thrive in the open Air in this Country, even in the hottest Part of the Year; therefore they should constantly remain in the Stove, observing to let in a large Share of fresh Air in Summer, but in Winter they must be kept warm: with this Management the Plants will produce their Flowers, and make a beautiful Appearance in the Stove, amongst other tender exotic Plants.

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GALEGA, Goats-rue.

To this Article must be added;

4. **GALEGA** *Americana*, foliis subrotundis, floribus coccineis. *Houst.* American Goats-rue, with roundish Leaves, and scarlet Flowers.

5. **GALEGA** *Americana frutescens*, flore purpureo, foliis sericeis. *Plum.* Shrubby American Goats-rue, with silken Leaves.

The fourth Sort was discovered by the late curious Botanist Dr. *William Houstoun*, at *Campechy*, from whence he sent the Seeds into *Europe*. These Plants are Annuals, and must be raised on a Hot-bed early in the Spring; and when they are fit to transplant, should be each put into a separate Half-penny Pot, filled with fresh light Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to screen them from the violent Heat of the Sun, until they have taken Root; after which time they should have a large Share of fresh Air admitted to them in warm Weather, and must be frequently watered. When these Plants have filled the Pots with their Roots, they should be gently shaken out, being careful to preserve as much of the Earth to their Roots as possible, and put into Pots a Size larger, filling them up with the like fresh Earth, and plunged into the Hot-bed again, observing to water and give Air to them as before: with this Management they will flower in *July*, and in *September* they will perfect their Seeds, and the Plants will soon after decay.

The fifth Sort is also a Native of *America*, and was discovered by Father *Plumier*; this is also propagated by Seeds, which should be sown on a Hot-bed in the Spring; and when the Plants are come up, they must be transplanted,

planted, and treated in the same Manner as hath been directed for the former Sort; but this being a shrubby Plant of a longer Continuance, must be placed in the Bark-stove in the Winter, and should be treated after the Manner of other tender exotic Plants; for it seldom flowers until the third Year, and if the Plants are removed abroad in Summer, will scarcely ever flower in this Country.

GALEOPSIS, Stinking Dead-nettle.

To this Article must be added;

3. *GALEOPSIS angustifolia Cretica viscosa*. Boerb. Ind. alt. Narrow-leav'd viscous stinking Dead-nettle of Candy.

4. *GALEOPSIS procerior fatida spicata*. Tourn. Common Hedge-nettle.

5. *GALEOPSIS five urtica iners, flore luteo*. J. B. Yellow Archangel, or Dead-nettle.

6. *GALEOPSIS procerior fatidissima, spica longissima albâ*. Michel. The most stinking taller Hedge-nettle, with a long white Spike.

The third Sort is a Plant of humbler Growth than either of the two Sorts mentioned in the former Volume; this seldom rises above a Foot high, nor doth it ever become so woody; it is very clammy, and has a very strong bituminous Scent. This may be propagated by sowing of the Seeds in March, on an open Bed of light Earth; and when the Plants begin to appear, they should be carefully cleared from Weeds, and in dry Weather must be often refreshed with Water. When the Plants have obtained Strength enough to be transplanted, they should be carefully taken up; and some of them must be put into Half-penny Pots, filled with fresh light Earth; and the others may be planted in warm Borders, observing to water and shade them until they have taken Root; after which time, those which were planted into the Borders, will require no farther Care but to keep them clear from Weeds, and other Plants; and if the Winter proves favourable, they will succeed very well; but for fear these should be destroyed, you should place those which were planted into Pots, under a common Hot-bed Frame in Winter, where they should be exposed to the open Air in mild Weather; but in frosty Weather they should be covered to preserve them. The following Summer, these Plants will produce Flowers and Seeds, but the Plants may be preserved three or four Years, provided they are sheltered in Winter.

The fourth and fifth Sorts grow wild in most Parts of England, so are seldom preserved, except in botanic Gardens, for the sake of Variety; these grow under Hedges, and in shady Woods, where they spread and increase by their creeping Roots. The fourth Sort is sometimes used in Medicine.

These Plants being esteemed as Weeds, they are neglected by most Persons; tho', if they are planted under Trees in large Wilderness Quarters, they will thrive and make a pretty Appearance when they are in Flower. The Roots of these Plants may be taken up at Michaelmas, from the Woods and Places of their Growth, and transplanted into the Wil-

derness, allowing them a large Share of Room, because they spread very far by their creeping Roots; so that they should be planted in large Tufts at a great Distance from each other; and in the Spring they will rise about two Feet high, and produce their Flowers in great Plenty, when they will afford an agreeable Variety, in such Places where few other Plants will thrive: so that by introducing some of these common Plants into Gardens, there may be a great Variety produced in Wildernesses, where the Ground is often bare, and doth not produce any kind of Plants, which afford no pleasing Prospect to Persons who walk thro' the shady Paths of these Quarters; for it is much better to see any of the most common Weeds covering the Surface of the Ground amongst the Trees, than to have it quite bare. But these Plants afford an agreeable Prospect when they are in Flower, and require very little Culture.

The sixth Sort was discovered in Italy, by Signior Micheli, Professor of Botany to the late Duke of Tuscany, who sent the Seeds into England; this is full as hardy as either of the former Sorts, and may be propagated in the same Manner.

GARIDELLA. This Plant was so named by Dr. Tournefort, in Honour to Dr. Garidel, who was Professor of Physic at Aix in Provence.

The Characters are;

It hath a rose-shaped Flower, consisting of several horned Petals, which are bifid, and ranged in a circular Order; from whose many-leav'd Cup rises the Pointal, which afterward becomes a Head composed of many oblong Pods, which open length-ways, and are full of roundish Seeds.

We know but one Sort of this Plant, viz.

GARIDELLA foliis tenuissime divis. Tourn. Garidella with very narrow-divided Leaves.

This Plant is very near a-kin to the *Nigella*, or *Fennel-Flower*; to which Genus it was placed by the Writers of Botany before Dr. Tournefort, and was by him separated from it, as differing in the Form of the Flower.

It grows wild in Candy, and on Mount Baldus in Italy, as also in Provence, where it was discovered by Dr. Garidel, who sent the Seeds to Dr. Tournefort, for the Royal Garden at Paris.

This is an annual Plant, whose Seeds should be sown in the Spring, on a Bed or Border of light fresh Earth, where the Plants are designed to remain (for they seldom thrive, if they are transplanted): when the Plants are come up, they must be carefully cleared from Weeds; and where they are too close, they must be thinned, leaving them about four or five Inches apart; and as they grow up, so they must constantly be kept clear from Weeds, which, if suffered to grow amongst the Plants, will soon over-bear and destroy them. In June these Plants will produce their Flowers, and in August the Seeds will ripen; which if permitted to fall, will come up in Autumn, and

and require no other Culture, but to keep them clear from Weeds.

GENERATION.

To this Article must be added;

Some Persons have objected to the Theory of the Generation, as laid down in the former Volume of the *Gardeners Dictionary*, because they have observed some female Plants produce Fruit, without having been impregnated by the Male.

It is certain, that the female Plants may produce Fruit, without the Impregnation of the Male; but it is not certain, that this Fruit or Seed will, if sown, produce another Plant. What has been so often related by Travellers and Historians, of the Necessity of the male Palm-tree being near the female, in order to render it fruitful, hath been fully refuted by Father *Labat*, in his Account of *Africa*, where he has treated of the several Sorts of Palms: he says, That he observed in *Martinico*, a large Palm-tree, which grew by the Side of a Convent, which produced Fruit in Plenty, tho' there was no other Palm-tree growing within two Leagues of this; but he also observed, that none of these Fruit would grow, tho' they had made many Trials of them; so that they were obliged to procure some Fruit from *Barbary*, in order to propagate these Trees. He likewise adds, That the Fruit which grew on this female Tree, never ripened so perfectly, nor was so well tasted, as those which came from Trees which had stood near some of the Male. Therefore we may conclude, that the Fruit or Seed may be produced by the female Plants of most Kinds, without the Assistance of the male Sperm, which may appear to Sight perfect, and fit to produce other Plants; but if we examine the Seeds, we shall find that most of them have not the Germ, or little Plant inclosed, nor will grow, if they are sown.

From a repeated Number of Experiments, in separating the male from the female Plants, I have always observed, that where it has been done in Time, and with proper Care, so as that there could have been none of the *Farina fecundans* of the male Plant scattered on the Female; that tho' the female Plants have produced sometimes fair Seeds to Appearance, yet, when they have been carefully sown, there has not been one Plant produced from them, except in one Experiment, which I repeated two Years on a female *Briony* Plant, which grew singly, having no other Plant of the same Kind near it, yet did perfect Seeds, which grew very well the following Season. This Experiment requires a farther Repetition, before any Thing can be ascertained in relation to the Theory of Generation, there having been so many Experiments made on a great Variety of Plants, which have proved the Necessity of the *Farina fecundans* impregnating the female Plants to render them fruitful.

GENISTA, Broom.

To this Article must be added;

- I. GENISTA *Hispanica pumila odoratissima*.

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Tourn. Most sweet-scented low *Spanish* Broom.

2. GENISTA *Lusitanica, parvo flore luteo.* *Tourn.* Portugal Broom, with a small yellow Flower.

3. GENISTA *tinctoria Germanica.* C. B. P. Green-wood, or Dyers-weed, or Wood-waxen.

4. GENISTA *tinctoria Austriaca maxima.* Boerb. Greater Austrian Dyers-weed, or Wood-waxen.

5. GENISTA *tinctoria Germanica, foliis angustioribus.* C. B. P. German Dyers-weed, or Wood-waxen, with narrow Leaves.

6. GENISTA *tinctoria frutescens, foliis incanis.* C. B. P. Shrubby Dyers-weed, with hoary Leaves.

7. GENISTA *tinctoria Lusitanica maxima, PIURNA LUSITANORUM.* *Tourn.* Great Portugal Dyers-weed, called *Piurna* by the Portuguese.

8. GENISTA *tinctoria latifolia Lucensis.* *Tourn.* Broad-leav'd Dyers-weed of *Luca*.

9. GENISTA *humilior Pannonica.* *Tourn.* Lower Broom of *Pannonia*.

10. GENISTA *ramosa, foliis hyperici.* C. B. P. Branching Broom, with St. Johnwort-leaves.

11. GENISTA *Africana frutescens, rusci nervosis foliis.* Oldenl. Shrubby African Broom, with ribbed Butchers-Broom Leaves.

12. GENISTA *Africana frutescens, rusci angustis foliis.* Oldenl. Shrubby African Broom, with narrow Butchers-Broom Leaves.

13. GENISTA *Africana arborescens, argentea lanugine pubescens.* Oldenl. Tree-like African Broom, covered with a silvery Down.

14. GENISTA *Africana frutescens spicata purpurea, foliis angustissimis.* Oldenl. Purple-spiked shrubby African Broom, with very narrow Leaves.

15. GENISTA *Africana frutescens spicata, laricis foliis.* Oldenl. Spiked shrubby African Broom, with larch-tree Leaves.

16. GENISTA *Africana frutescens capitata, laricis foliis.* Oldenl. Headed African shrubby Broom, with larch-tree Leaves.

17. GENISTA *Africana frutescens, capitulis lanuginosis, laricis brevissimo folio.* Oldenl. Shrubby African Broom, with woolly Heads, and a very short larch-tree Leaf.

18. GENISTA *Africana frutescens, laricis incanis foliis.* Oldenl. Shrubby African Broom, with hoary Larch-tree Leaves.

The first Sort here mentioned is not very common in the *English* Gardens; this is of much lower Growth, than the common *Spanish* Broom, and the Flowers have a more agreeable Scent; but being equally hardy with the common Sort, may be easily propagated in *England*, and will be a very ornamental Shrub, to plant in Front of the *Spanish* Broom; will fill up the Bottom, and hide the naked Stems of those Plants; so are very proper to form Clumps of these Trees, which will have an agreeable Effect, when properly placed in Gardens.

The second Sort is also uncommon at present in *England*, but the Seeds may be easily procured from *Portugal*. This Sort hath small Flowers, which have little Scent, so is not so valuable

valuable as the former Sort, nor is it quite so hardy. This will live in the open Air in moderate Winters, but in very hard Frost they will be in Danger of being destroyed, where they are not sheltered: so that some of these Plants should be kept in Pots, that they may be removed into the Green-house in Winter, to preserve the Kind.

The third Sort grows wild in uncultivated Places in most Parts of *England*, and is gathered for the Use of the Dyers; this, as also the common Broom, are extremely bitter; so that, whenever they are eaten by the *Cows*, it gives a very bitter Taste to the Cheese and Butter which is made of their Milk.

The fourth Sort grows wild in *Austria*, from whence the learned Dr. *Boerhaave* procured the Seeds, who has since distributed it to several curious Persons in *England*.

The fifth Sort grows wild in *Germany*, as also in *France* and *Flanders*, but is not very common in *England*. These three Sorts are of humble Growth, seldom rising above two Feet high; but as they make a fine Appearance when they are in Flower, so they merit a Place in every good Garden; where, if they are disposed in Clumps, in the Middle whereof the common *Spanish* Broom must be planted, and round that the first Sort here mentioned, with these three Sorts round the Outside, the whole Clump will appear like one great Bush of yellow Flowers; for as they all produce their Flowers at the same Season, which continue a considerable time, so they make an agreeable Variety in large Gardens, and require very little Care, excepting to clear them from large over-bearing Weeds, after they have taken Root.

The sixth and seventh Sorts rise to a greater Height than either of the former, but are somewhat tenderer, being Natives of warmer Countries; so some of these should be kept in Pots, that they may be removed into Shelter in Winter; for tho' they will endure the Cold of our ordinary Winters in the open Air, if planted in a warm Situation, yet they are often destroyed in very hard Frosts; so that where some of them are not protected, the Sorts may be lost.

The eighth and ninth Sorts seldom rise above two Feet high, so are proper to mix with the third, fourth and fifth Sorts, to form Clumps, &c. These are somewhat tender while young, so should be kept in Pots and sheltered for a Year or two while young; but afterward they will live in the open Air very well, provided they are planted in a warm Situation.

The tenth Sort is a low spreading Plant, seldom rising to the Height of two Feet, but spreads its Branches pretty far on every Side. The Flowers of this Kind are small, and being produced thinly at the Extremity of the Branches, does not make so good an Appearance, as either of the former Sorts. This is very hardy, so will endure the Cold of our Climate extremely well.

All these Sorts are propagated by Seeds, which should be sown on a Bed of light Earth,

in an open Situation, toward the End of *March*; for if they are sown too early, and the Spring should prove cold or wet, the Seeds generally perish in the Ground. When the Plants begin to appear, they should be carefully weeded, and in very dry Weather they should be gently refreshed with Water, which will very much promote their Growth: during the summer Season, they must be constantly kept clear from Weeds, which is the only Culture they will require. In this Bed the Plants may remain until the following Spring, when they should be transplanted just before they begin to shoot; so that you should prepare a Spot of fresh Ground, which should be carefully dug and cleansed from the Roots of bad Weeds; then you must take up the Plants with great Care, for they generally shoot long Roots pretty deep in the Ground; which, if they are too much torn, will endanger the Plants. These must not lie long out of the Ground, for at this Season their Roots will dry very soon; therefore they should be immediately planted, and the Surface of the Ground must be covered with Mulch, to prevent the Sun and Wind from entering the Ground, and drying the Roots of the Plants; then they should be well watered, and if the Spring should prove dry, it will be proper to repeat the Waterings two or three times in a Week, until the Plants are well rooted. The Distance which should be allowed to these Plants, for those of the larger Growth, is three Feet Row from Row, and eighteen Inches asunder in the Rows; but for those of small Growth, two Feet Distance Row from Row, and one Foot asunder in the Rows, will be sufficient. In this Nursery the Plants may remain two Years; during which time they should be constantly kept clear from Weeds, and the Ground between them must be carefully dug every Spring, to prevent their Roots from running out too far; for as they send forth long slender Tap-roots, so, if these are not cut to force out Fibres near the Stem of the Plants, they will be in Danger of suffering when they are transplanted; for which Reason they should not remain in the Nursery longer than two Years, because these Plants cannot be removed, when they are older, with any Safety. The best Season to transplant these Plants, is toward the End of *March*, or in the Beginning of *April*, just before they begin to shoot; when they must be carefully taken up, as was before directed, and planted again immediately, covering the Surface of the Ground with Mulch, and observing to water them in dry Weather, until they have taken Root again; after which time they will require no farther Care, but to keep them clear from great over-bearing Weeds, which, if permitted to grow amongst them, would greatly weaken, if not absolutely destroy them. These Plants most of them flower in *June*, *July* and *August*, and their Seeds ripen in *September*.

The eleventh, twelfth, thirteenth, fourteenth, fifteenth, sixteenth, seventeenth, and eighteenth Sorts, are Natives of the Country about the *Cape of Good Hope*, so are tenderer than either of the former Sorts; these are preserved

served in Pots, and removed into the Green-house in Winter; for they cannot endure the Cold of our Winters in the open Air: but they should have a great Share of fresh Air in mild Weather; so, if they are placed in an airy Glass-case, amongst *Ficoides*, and other hardy exotic Plants, which require a large Share of Air in Winter, as also as much Sun as possible; they will thrive better than when they are placed amongst Orange-trees in a common Green-house, and will flower much better. In Summer these Plants must be placed abroad in a warm Situation, where they may be defended from strong Winds; and in dry Weather they must be frequently watered, which will encourage them to flower freely, and cause them to produce good Seeds; for want of which Care the Flowers often fall off, and are not succeeded by Pods.

These Plants are propagated by Seeds, which should be sown early in the Spring, in Pots filled with light fresh Earth, and plunged in a moderate Hot-bed of Tanners-bark; and when the Plants begin to appear, they must be kept clear from Weeds, and frequently refreshed with Water: the Glasses of the Hot-bed must also be raised every Day, to admit fresh Air to the Plants, otherwise they will draw up very weak; for as these Plants are not very tender, so they must be inured to bear the open Air as soon as the Season proves favourable; toward the latter End of *May*, the Pots should be removed out of the Hot-bed, and placed for a little time in a Glass-case, where they may have a greater Share of Air; and the Middle of *June*, they should be placed in the open Air in a sheltered Situation, where they may remain till *October*; when they must be removed into the Glass-case again, where they should be placed on Shelves, to enjoy the Advantage of Air and Sun; and during the Winter they must be frequently refreshed with Water, but it should be given in small Quantities at this Season, especially while the Plants are young. The following Spring, these Plants should be shaken out of the Pots, and carefully parted, planting each of them into a separate small Pot, filled with light fresh Earth, and plunged into a very moderate Hot-bed, which will facilitate their taking Root; but the Glasses of the Hot-bed should be covered with Mats every Day, to screen the Plants from the Sun, until they are rooted; after which time they should have a large Share of fresh Air, and must be frequently watered. In *May* they must be inured to bear the open Air by degrees, into which they should be removed the Beginning of *June*, and placed in a warm Situation. With this Management these Plants will thrive very well, and in two Years after will begin to produce their Flowers, when they will make an agreeable Diversity amongst other exotic Plants.

GESNERA.

This Plant was so named by Father *Plumier*, who discovered it in *America*, in Honour

to *Conrad Gesner*, a very learned Botanist, and natural Historian.

The Characters are;

It hath an anomalous personated Flower, consisting of one Leaf, from whose Cup arises the Pointal, fixed like a Nail in the hinder Part of the Flower; which afterward becomes a membranaceous Fruit, divided into two Cells, which are filled with small Seeds.

The Species are;

1. *GESNERA humilis, flore flavescente. Plum. Nov. Gen.* Low Gesnera, with a yellowish Flower.

2. *GESNERA amplo digitalis folio tomentoso. Plum. Nov. Gen.* Gesnera with a large woolly fox-glove Leaf.

3. *GESNERA arborescens, amplo flore fimbriato & maculoso. Plum. Nov. Gen.* Tree-like Gesnera, with a large furbelowed and spotted Flower.

The first and second Sorts were found by the late *Dr. William Houstoun* in *Jamaica*, from whence he sent their Seeds to *England*; but by their being a long time out of the Ground, there was not any of them which grew. The third Sort was discovered by *Father Plumier* at *Martinico*; this Sort rises to the Height of eight or ten Feet, and has a woody Stem; but the other two Sorts seldom rise above three Feet high.

These Plants are propagated by Seeds, which should be sown as soon as possible after they are ripe; for being very small and light, if they are kept long out of the Ground, they will not grow: therefore the surest Method to obtain these Plants, is to procure them in Tubs of Earth from *America*. The Seeds should be sown in the Tubs filled with fresh Earth, and placed in a shady Situation; and when the Plants come up, they must be frequently watered, and kept clear from Weeds. These Tubs should remain in the Country, until the Plants are pretty strong; for if they are sent over too young, they will be in great Danger of perishing before they arrive in *England*. When they are put on board the Ship, they should be covered in the Heat of the Day with Tarpaulins, to screen them from the violent Heat of the Sun, as also in bad Weather to prevent the Salt-water from washing of them. During their Passage they should be often refreshed with Water, while they are in a warm Latitude; and should have as much Air as possible, when the Weather will permit; but as they arrive in a cooler Latitude, so they must have a less Quantity of Water given to them, and should be screened from the Cold.

When these Plants arrive in *England*, they should be carefully taken out of the Boxes, and each planted into a Pot, filled with rich light Earth, and then plunged into a Hot-bed of Tanners-bark, observing to water them, and screen them from the Heat of the Sun until they have taken Root; after which time they should have fresh Air admitted to them in proportion to the Warmth of the Season, and must be frequently watered. In this Bed the Plants may remain until *Michaelmas*, when they

they should be removed into the Stove, and plunged into the Tan: during the winter Season they will require to be frequently watered, but it must not be given in large Quantities; but in Summer they must be plentifully watered in hot Weather. As these Plants are too tender to endure the Cold of our Air even in Summer, so they must constantly remain in the Stove, where in Winter they must be kept very warm; but in Summer they must have a large Share of fresh Air in warm Weather; and if their Leaves contract Filth, it must be carefully washed off; otherwise it will harbour Insects, which will in time destroy the Plants. With this Management the Plants will thrive, and produce Flowers, which will afford an agreeable Variety amongst other tender exotic Plants in the Stove.

GEUM, Sanicle.

To this Article must be added;

1. *GEUM rotundifolium minus*. Tourn. Lesser round-leaved Sanicle.

2. *GEUM folio circinato, pistillo floris pallido*. Tourn. Round-leaved Sanicle, with a pale Pointal.

3. *GEUM folio subrotundo minori, pistillo floris rubro*. Tourn. Sanicle with a lesser roundish Leaf, and a red Pointal.

4. *GEUM folio circinato, acutè crenato, pistillo floris rubro*. Tourn. Sanicle with a round sharp jagged Leaf, and a red Pointal.

5. *GEUM folio subrotundo minimo*. Tourn. Sanicle with a very small roundish Leaf.

6. *GEUM Creticum, folio circinato villosò, flore magno albo*. Tourn. Cor. Candy Sanicle, with a round hairy Leaf, and a large white Flower.

7. *GEUM orientale rotundifolium supinum, flore aureo*. Tourn. Cor. Low round-leav'd Eastern Sanicle, with a golden Flower.

8. *GEUM orientale, cymbalariae folio molli & glabro, flore magno albo*. Tourn. Cor. Eastern Sanicle, with a soft smooth ivy-wort Leaf, and a large white Flower.

The five first-mentioned Sorts grow on the Alps and Appennines in Plenty, from whence they have been transplanted into some curious Gardens by Lovers of Variety: they are all extreme hardy Plants, so should be planted in shady moist Places, and a poor Soil, where they will thrive much better than in an open Situation. They are propagated by Off-sets, which they send forth in great Plenty; the best Season for this Work is in October, that the Plants may be well rooted before Spring, otherwise they will not flower so strong the following Summer. Some of these Plants were formerly planted for Edgings on the Sides of Borders in the Flower-garden, but they are by no means fit for this Purpose; because they ramble too far, and are very subject to decay in Patches, which breaks the Edging, and renders it unsightly; so that they appear more beautiful, when planted in Patches on shady moist Borders, where few other Plants will thrive; in such Places these Plants will make a pretty Variety. They flower in May, and some of them will produce good Seeds in

Autumn; but as they increase so fast by Off-sets, so few Persons regard their Seeds.

The other three Sorts were discovered by Dr. Tournefort in the Levant, who sent them to the Royal Garden at Paris. These are not quite so hardy as the former Sorts, but will endure the Cold of our ordinary Winters very well in the full Ground, being never destroyed but by extreme hard Frost. These may be propagated by Off-sets, in the same Manner as the former Sorts, and should have a shady Situation.

GLADIOLUS, Corn-flag.

To this Article must be added;

1. *GLADIOLUS floribus uno versu dispositis, major & procerior, flore candicante*. C. B. P. Greater and taller Corn-flag, with whitish Flowers ranged all on one Side.

2. *GLADIOLUS floribus uno versu dispositis, minor & humilior*. C. B. P. Smaller and lower Corn-flag, with Flowers ranged on one Side.

3. *GLADIOLUS minor, floribus uno versu dispositis incarnatis*. H. L. Smaller Corn-flag, with flesh-coloured Flowers ranged on one Side.

4. *GLADIOLUS utrinque floridus, flore rubro*. C. B. P. Corn-flag, with red Flowers on both Sides.

5. *GLADIOLUS floribus uno versu dispositis, minor*. C. B. P. Smaller Corn-flag, with Flowers ranged on one Side.

All these Sorts of Corn-flag are as hardy as those mentioned in the former Volume of the Gardeners Dictionary; and may be propagated either by Off-sets or Seeds, in the same Manner as is there directed; so I shall not repeat it again in this Place.

GLAUCIUM, Horned Poppy.

To this Article must be added;

GLAUCIUM orientale, flore magno rubro. Tourn. Cor. Eastern Horned Poppy, with a large red Flower.

This Sort was found by Dr. Tournefort in the Levant, who sent the Seeds to Paris. It is a biennial Plant, which may be propagated by Seeds, as the other Sorts; but should have light poor Soil, in which it will endure the Cold of the Winter, much better than if sown on a rich Ground.

GLAUX, Sea Milk-wort.

The Characters are;

It hath a bell-shaped Flower, consisting of one Leaf, whose Brims are expanded and cut into several Segments; from the Centre arises the Pointal, which afterwards becomes a round Fruit or Husk, opening from the Top downwards, and filled with small Seeds.

The Species are;

1. *GLAUX maritima*. C. B. P. Sea Milk-wort, or black Salt-wort.

2. *GLAUX maritima, flore albo*. Tourn. Sea Milk-wort, with a white Flower.

3. *GLAUX palustris, flore striato clauso, foliis portulacæ*. Tourn. Marsh Milk-wort, with a striped Flower, and purslane Leaves.

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These Plants grow wild in *England*, and are rarely preserved in Gardens, unless for the sake of Variety. They may be taken up in the Places of their Growth, and planted in Pots, filled with poor gravelly Earth, and in Summer must be frequently watered: with this Management they may be preserved, and they will produce Flowers every Year.

GLOBULARIA.

The Characters are;

It hath a flosculous Flower, consisting of many Florets, which are divided into several Segments, and have one Lip; these are contained in a proper Empalement, out of the Bottom of which arises the Pointal, fixed like a Nail to the lower Part of the Floret, and becoming a Seed, bidden in the Capsule, which before was the Empalement of the Floret. On that Capsule sit the Placenta's, which occupy the middle Part of the common Empalement.

The Species are;

1. GLOBULARIA vulgaris. Tourn. Common Globularia.

2. GLOBULARIA Pyrenaica, folio oblongo, caule nudo. Tourn. Pyrenean Globularia, with an oblong Leaf, and naked Stalk.

3. GLOBULARIA montana humillima repens. Tourn. The lowest creeping Mountain Globularia.

4. GLOBULARIA fruticosa, myrti folio tridentato. Tourn. Shrubby Globularia, with a trifid myrtle Leaf.

5. GLOBULARIA Africana frutescens, thymeleæ folio lanuginoso. Tourn. Shrubby African Globularia, with a woolly spurge-laurel Leaf.

6. GLOBULARIA spinosa. Tourn. Prickly Globularia.

7. GLOBULARIA Alpina minima, origani folio. Tourn. The smallest Alpine Globularia, with a wild-marjoram Leaf.

8. GLOBULARIA orientalis, floribus per caulem sparsis. Tourn. Cor. Eastern Globularia, with Flowers scattered along the Stalks.

9. GLOBULARIA orientalis, flore amplissimo. Tourn. Cor. Eastern Globularia, with a very large Flower.

The first of these Plants grows plentifully about *Montpelier*, as also at the Foot of the Mountains *Jura* and *Saleva*, and in many other Parts of *Italy*, and in *Germany*. This Plant hath Leaves very like those of the *Daizy*, but are thicker and smoother; the Flowers grow on Foot-stalks, which are about six Inches high, and are of a globular Form.

The second Sort grows plentifully in the Woods, and on the *Pyrenean* Mountains; this is much larger than the former, and the Foot-stalk is quite naked; the Leaves are narrower and much longer.

The third Sort is a very low Plant, whose Branches trail on the Ground, and strike Roots out from their Joints, whereby it propagates itself very fast. The Flowers grow on short Foot-stalks, and are of a blue Colour.

The first and second Sorts may be propagated by parting of their Roots, after the manner of *Daizies*; but the third Sort is easily

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propagated from the trailing Branches, which take Root. The best Season for parting and transplanting of these Plants, is in *September*, that they may take new Root before the frosty Weather comes on: they should be planted in Pots, filled with fresh Earth, and placed in a shady Situation until they have taken Root; after which time they may be exposed to the open Air until the Beginning of *November*, when it will be proper to place them under a Garden-frame, where they may be protected from severe Frost, which sometimes destroys them in this Climate; but they should have as much free Air as possible in mild Weather. In the summer Season they should be placed where they may have the Morning Sun, and in dry Weather should be frequently refreshed with Water. With this Management they will increase, and produce their Flowers every Year, but they rarely perfect their Seeds in this Country.

The fourth Sort grows about *Montpelier* in *France*, and in *Valentia*, and several other Parts of *Spain*. This has a hard woody Stem, and rises to about two Feet high, having many woody Branches, beset with Leaves like those of the *Myrtle-tree*; on the Top of the Branches the Flowers are produced, which are of a blue Colour, and globe-shaped. This Plant may be propagated by Cuttings, which should be cut off in *April*, just before they begin to make new Shoots; these Cuttings should be planted into Pots, filled with light fresh Earth, and then placed into a very moderate Hot-bed, observing to water and shade them until they have taken Root; when they may be taken out of the Bed, and inured to bear the open Air by degrees. In Summer these Plants may be exposed with other hardy exotic Plants; and in Winter they should be placed under a Hot-bed Frame, where they may enjoy the free Air in mild Weather, but should be screened from hard Frost, which will destroy them, if they are exposed thereto. This Plant never produces good Seeds in this Country.

The fifth Sort grows in the Country about the *Cape of Good Hope*; this is a Shrub which rises to the Height of seven or eight Feet, and divides into many Branches, which are closely beset with thick stiff Leaves, much like those of the *Cneorum Matthioli*; at the Division of the Branches, the Flowers are produced, which are round, woolly, and of a silver Colour, and at first have the Appearance of the Katkin of the *Mountain Osier*. This Shrub may be propagated by Cuttings, which should be planted in *April*, just as the Plant begins to shoot, in Pots filled with fresh light Earth, and plunged into a very moderate Hot-bed of *Tanners-bark*, observing to water and shade them until they have taken Root; after which time you must inure them by degrees to bear the open Air; then they must be taken out of the Hot-bed, and may be placed amongst other Exotics in a well sheltered Situation, observing to water them in dry Weather; in this Place they may remain till *October*, when they should be removed into the *Green-house*, and placed

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placed where they may have as much free Air as possible in mild Weather; for this Plant only requires to be screened from Frost, being tolerably hardy: with this Management the Plants will thrive exceedingly, and in a few Years will produce Flowers.

The sixth Sort was found in the Mountains of *Granada*, by *D. Albinus*. This Plant is of low Growth, and may be propagated as the first Sort, as may also the seventh Sort, which is the least of all the Sorts, and the most hardy; so that it should have a shady Situation in Summer, but in Winter it will be proper to shelter them from severe Frost.

The eighth and ninth Sorts were found by *Dr. Tournefort*, in the *Levant*; these are somewhat tender, and should be sheltered from the Frost in Winter, but in Summer they may be exposed with other hardy exotic Plants, and require to be frequently watered in dry Weather. These may be propagated by Seeds, or by parting of their Roots, as was directed for the former Sorts.

GLYCYRRHIZA, Liquorice.

To this Article must be added;

GLYCYRRHIZA orientalis, filiquis birsutissimis. Tourn. Cor. Eastern Liquorice, with hairy Pods.

The first Sort mentioned in the former Volume of the *Gardeners Dictionary*, is that which is commonly cultivated in *England* for Medicine; the other two Kinds are preserved in curious botanic Gardens for Variety; but their Roots are not so full of Juice as the first, nor is the Juice so sweet: tho' the second Sort seems to be that which *Dioscoridis* has described and recommended; but I suppose the Goodness of the first has occasioned its being so generally cultivated in *Europe*.

These two Sorts last-mentioned, perfect their Seeds in *England*, by which they may be propagated, whereas the common Sorts seldom produce any in this Country. They may also be propagated by Roots, as the common Sort, which is directed in the former Volume, so I shall not repeat it in this.

GNAPHALODES.

The Characters are;

It is a Plant with a flosculous Flower, consisting of several barren Florets; the Embryos which constituted the Empalement of the Flower, become a crested Fruit, pregnant with a Seed for the most part oblong.

We have but one Species of this Plant at present in *England*, which is;

GNAPHALODES Lusitanica. Tourn. Portugal Gnaphalodes.

This is a low annual Plant, which seldom rises above four Inches high, but divides into several trailing Branches, which are beset with small silver-coloured Leaves, which have a great Resemblance to those of Cudweed; but the Flowers are so small as not to be conspicuous, unless they are magnified by a Glass. This Plant is seldom preserved in Gardens, unless it be for the sake of Variety, for there is little Beauty in it. The Seeds of this Plant

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may be sown the Beginning of *April*, on a Bed of light Earth, in an open Situation; and when the Plants are come up, they should be kept clean from Weeds, and in very dry Weather they should be sometimes refreshed with Water: with this Management the Plants will flower in *July*, and in *August* the Seeds will ripen, when the Plants will soon after decay.

GRAFTING.

To this Article add;

Of late Years some Persons have made use of another Composition for Grafting, which they have found to answer the Intention of keeping out the Air, better than the Clay prescribed in the former Volume of the *Gardeners Dictionary*. This is composed of Turpentine, Bees-wax and Rosin melted together; this, when of a proper Consistence, may be put on the Stock round the Graft, in the same Manner as the Clay is usually applied; and tho' it be not above a quarter of an Inch thick, yet will keep out the Air more effectually than the Clay; and as Cold will harden this, so there is no Danger of its being hurt by Frost, which is very apt to cause the Clay to cleave, and sometimes fall off; and when the Heat of Summer comes on, this Mixture will melt and fall off without any Trouble. In using of this, there should be a Tin or Copper-pot, with Conveniency under it to keep a very gentle Fire with Small-coal, otherwise the Cold will soon condense the Mixture; but you must be careful not to apply it too hot, lest you injure the Graft. A Person who is a little accustomed to this Composition, will apply it very fast, and it is much easier for him than Clay, especially if the Season is cold.

GRAMEN, Grass.

In the former Volume of the *Gardeners Dictionary*, I have only mentioned in general the Manner of making and keeping Grass in Gardens for Pleasure, and have not there enumerated the Species of Grass; therefore in this Volume I shall set down those Sorts which are sowed for Pasture, and are useful to improve Land; as also those which are troublesome Weeds, and such likewise as are useful in Medicine, &c.

1. *GRAMEN loliaceum, angustiore folio & spica. C. B. P.* Red Darnel Grass, or Rey Grass.

2. *GRAMEN pratense minus seu vulgatissimum. Raii Syn.* The most common Meadow Grass.

3. *GRAMEN pratense paniculatum medium. Raii Syn.* The middle Sort of Meadow Grass.

4. *GRAMEN pratense paniculatum majus, latiore folio. C. B. P.* The greatest Meadow Grass.

5. *GRAMEN secalinum. Ger. Emac.* Tall Meadow Rie Grass.

6. *GRAMEN secalinum & secale sylvestre. Ger. Emac.* Wild Rie, or Rie Grass.

7. *GRAMEN secalinum majus sylvaticum. Hist. Oxon.* Great-wood Rie Grass.

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8. GRAMEN *panicum, spica simplici laevi.* Raii Syn. Panic Grass, with a single smooth Ear.

9. GRAMEN *panicum, spica divisa.* C. B. P. Panic Grass, with a divided Spike.

10. GRAMEN *panicum, spica aspera.* C. B. P. Rough-eared Panic Grass.

11. GRAMEN *loliaceum, spica longiore.* C. B. P. Darnel.

12. GRAMEN *avenaceum dumetorum spicatum.* Raii Syn. Spiked-hedge Oat Grass.

13. GRAMEN *avenaceum pratense.* Park. Meadow Oaten Grass.

14. GRAMEN *avenaceum supinum arvense.* Park. Low Meadow Oaten Grass.

15. GRAMEN *miliaceum vulgare.* Park. Common Millet Grass.

16. GRAMEN *spicatum, semine miliaceo albo.* Tourn. Common Canary Grass.

17. GRAMEN *spicatum, semine miliaceo nigro.* Tourn. Black Canary Grass.

18. GRAMEN *spicatum, semine miliaceo minore nigro.* Tourn. Lesser black Canary Seed.

19. GRAMEN *spicatum, semine miliaceo griseo.* Tourn. Grey Canary Seed.

20. GRAMEN *paniculatum, locustis maximis candicantibus tremulis.* Tourn. The greatest Quaking Grass, with white Panicles.

21. GRAMEN *paniculatum, locustis maximis phoeniceis tremulis.* Tourn. The greatest Quaking Grass, with scarlet Panicles.

22. GRAMEN *tremulum medium.* Park. The middle Quaking Grass.

23. GRAMEN *tremulum minus, panicula parva.* Park. Smaller Quaking Grass, with a small Panicle.

24. GRAMEN *murorum spica longissima.* Ger. Emac. Capons-tail Grass.

25. GRAMEN *dactylon, latiore folio.* C. B. P. Broad-leav'd Cocks-foot Grass.

26. GRAMEN *dactyloides, radice repente.* Ger. Emac. Creeping Cocks-foot Grass.

27. GRAMEN *typhinum majus seu primum.* Ger. Emac. Greatest Cats-tail Grass.

28. GRAMEN *typhinum minus.* Ger. Lesser Cats-tail Grass.

29. GRAMEN *cristatum.* J. B. Smooth-crested Grass.

30. GRAMEN *spica triticea, repens vulgare, caninum dictum.* Raii Syn. Common Dogs Grass, or Quick Grass, or Couch Grass.

31. GRAMEN *alopecuroides majus.* Ger. Emac. Common Fox-tail Grass.

32. GRAMEN *alopecuroides minus.* Park. Smaller Fox-tail Grass.

33. GRAMEN *spicatum, durioribus & crassioribus locustis, spica brevi.* Tourn. French Haver Grass.

34. GRAMEN *spicatum, durioribus & crassioribus locustis, spica longissima.* Tourn. French Haver Grass, with a long Spike.

35. GRAMEN *paniculatum, spicis crassioribus & brevioribus variegatum.* Tourn. Striped Grass.

The fourteen first-mentioned Sorts grow pretty common in the Pastures in most Parts of England, and are often intermixed in the same Pasture; so that it is very rare to meet with a Pasture, which hath not ten or twelve Sorts of Grass

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in it; but the Sort which is generally sown about London, is the *Rey Grass*, which is very hardy, and will grow on cold sour Land better than most other Sorts; but as it seldom happens that the Seed is saved intire, without a Mixture of other Grass Seeds, so it is very rare to meet with a Pasture, which has not many Sorts in it.

The best Season for sowing of Grass Seed, is, the latter End of *August*, and the Beginning of *September*, that the Grass may be well rooted before the Frost sets in, which is apt to turn the Plants out of the Ground, when they are not well rooted. This Seed should be sown in moist Weather, or when there is a Prospect of Showers, which will soon bring the Grass up; for the Earth being at that Season warm, the Moisture will cause the Seeds to vegetate in a few Days.

The Land on which Grass-seed is intended to be sown, should be well ploughed and cleared from the Roots of noxious Weeds, such as *Couch Grass*, *Fern*, *Rushes*, *Heath*, *Gorse*, *Broom*, *Rest-Harrow*, &c. which if left in the Ground, will soon get the better of the Grass, and over-run the Land. Therefore in such Places where either of these Weeds abound, it will be a good Method to plough up the Surface in *April*, and let it lie some time to dry, then lay it in small Heaps, and burn it; the Ashes so produced, when spread on the Land, will be a good Manure for it: the Method of burning the Land, is particularly directed under the Article *Land*, which see; especially if it is a cold stiff Soil. But where *Couch Grass*, *Fern* or *Rest Harrow* is in Plenty, whose Roots run far under Ground, the Land must be ploughed two or three times pretty deep in dry Weather, and the Roots carefully harrowed off after each ploughing; which is the most sure Method to destroy them. Where the Land is very low, and of a stiff clayey Nature, which holds Water in Winter, it will be of singular Service to make some underground Drains, to carry off the Wet; which if detained too long on the Ground, will render the Grass sour. The Method of making these Drains are prescribed under the Article *Land*; which see.

Before the Seed is sown, the Surface of the Ground should be made level and fine, otherwise the Seed will be buried unequal. The Quantity of Grass-seed for an Acre of Land, is usually three Bushels; when the Seed is sown, it must be gently harrowed in, and the Ground rolled with a wooden Roller; which will make the Surface even, and prevent the Seeds being blown in Patches. When the Grass comes up, if there should be any bare Spots, where the Seed has not grown, they may be sown again, and the Ground rolled, which will fix the Seeds; and the first kindly Showers will bring up the Grass, and make it very thick.

Some People mix *Clover* and *Rey Grass* Seeds together, allowing ten Pounds of *Clover*, and one Bushel of *Rey Grass* to an Acre: but this is only to be done where the Land is designed to remain but three or four Years in Pasture, because

because neither of these Kinds are of long Duration; so that where the Land is designed to be laid down for many Years, it will be proper to sow the Grass-seeds by themselves, and not to mix either *Trefoil* or *Clover* amongst them.

The following Spring, if there should be any *Thistles*, *Ragwort*, or such other troublesome Weeds, come up among the Grass, they should be carefully cut up with a Spaddle before they grow large; and this should be repeated two or three times in the Summer, which will effectually destroy them; for if these Plants are suffered to ripen their Seeds, they will be blown all over the Ground, their Seeds having Down adhering to them, which assists their Transportation; so that they are often carried by the Wind to a great Distance, and thereby become very troublesome Weeds to the Grass. For want of this Care, how many Pastures may be seen almost over-run with these Weeds, (especially the *Ragwort*;) when a small Expence, if applied in time, would have intirely extirpated them! For a Man may go over several Acres of Land in one Day with a Spaddle, and cut up the Weeds just below the Surface of the Ground, turning their Roots upward; which if done in dry Weather, they will soon decay; but this must always be performed before the Plants come to have their Seeds formed, because after that, many Sorts will live long enough to nourish their Seeds after they are cut, so as to ripen them; when there will be a Supply of Weeds for some Years after, which cannot be extirpated without a much greater Expence.

The *Panic* Grasses are harsher than the common Meadow Grasses, so are rarely cultivated in *England*; for the Cattle do not care to feed on them, where they have any other Fodder; and as they are annual, so, if they were equally good, they would not be worth cultivating; for those Plants which require an annual Culture, are too expensive to be worth the Farmer's Care.

The *Canary* Grasses, are sown in some Parts of *England*, for their Seeds, which are used to feed Birds; the white Sort is generally preferred to the other, but the grey Sort is frequently intermixed with it. These Seeds should be sown the Beginning of *March*, on a moderate light Soil; for they do not thrive well on strong cold Land. The Surface of the Ground should be well stirred, and made even, before the Seeds are sown, that they may be equally buried. Three Bushels of this Seed are sufficient for an Acre of Land; when the Seed is sown, which should be done in dry Weather, the Ground must be gently harrowed to bury the Seeds, and then the Whole should be rolled with a wooden Roller; which will smooth the Surface of the Ground, and prevent the Seeds from being removed by strong Winds. When the Grass is come up, if there should be any rank Weeds amongst it, they must be cut up with a Spaddle, as was before directed; for if they are permitted to grow, they will do great Damage to the Grass.

The latter End of *July*, or the Beginning of *August*, the Seeds will ripen, when it should be cut, and as soon as it is dry, should be threshed out, or stacked; for if it remains abroad, the Birds will devour it: if the Crop succeeds, there will be upward of four Quarters on an Acre of Land.

The four Sorts of *Quaking Grass*, are rather esteemed as Curiosities, than for any real Use, so are sometimes allowed a Place in Gardens; these produce light scaly Heads on slender Foot-stalks, which are moved by every Wind, after the Manner of the Leaves of the *Aspen-tree*; from whence it had the Name of *Quaking Grass*, or in some Places *Cow-quakes*, or in other Places *Ladies-bair*. These Sorts are commonly in Head in *May*, which occasioned this old *English* Proverb; *May, come she early, come she late, makes the Cow quake*. The middle Sort of *Quaking Grass* grows very common in several Parts of *England*. The smaller Sort grows wild in the Island of *Jersey*; but the greatest Sort is not a Native of *England*, so is only to be found in some curious Gardens, where it is preserved for the sake of Variety.

The *Capons-tail Grass* is found growing by the Path-sides, and on Mud-walls, in several Parts of *England*, but is never cultivated for Use; this produces very long Spikes, which bend downward with the Weight of the Seed when it is near ripe; it is sometimes preserved in Gardens for Variety.

The two Sorts of *Cocksfoot Grass*, are found upon sandy Lands near the Sea in *Norfolk*, and the *West* of *England*, but are seldom cultivated, being coarse sorts of Grass, and never rise above six or eight Inches high, so are unfit for making Hay. The only Use of either of these Grasses is, for sowing on loose sandy Lands, which will not produce any other Sort of Grass; in which Places these will often thrive to Advantage; for as these spread close to the Surface of the Ground, so they preserve a Moisture in the Earth, by the close Growth of their Branches; and these Sorts will endure much more Drought, than most other Sorts of Grass. Of this kind of Grass, there are a great Number of *Species* in *America*, which are of great Use to the Inhabitants of the *Caribee Islands*; for some of them will thrive in the greatest Drought, and afford useful Food for their Cattle, when most other Vegetables are burnt up. Some of these Sorts send forth Roots at every Joint, whereby they spread and propagate themselves to a great Distance.

The two Sorts of *Cats-tail Grass* are found plentifully by the Side of Paths, and in Corn-fields, in many Parts of *England*, as also in some Pastures; but they are not profitable Grasses to cultivate.

The *Couch Grass* is one of the most troublesome Weeds in Corn-lands and Gardens, and is with great Difficulty extirpated; for the Roots of this Kind run very far under Ground, and every small Part of the Root will grow; so that if the Roots are torn into small Pieces, every one of them will propa-

propagate where-ever they are left in the Ground. Where the Land is stocked with this Grass, it should be ploughed two or three times in dry Weather, during the Heat of Summer; and after each Ploughing, the Ground should be carefully harrowed, to draw the Roots out, which should be drawn into Heaps, and then carted off the Ground; for if the Roots are left, they will strike into the Ground after the first Shower of Rain, and soon become troublesome: such foul Land is very unfit to sow with Grain; therefore it will be proper to sow with Turnips, and Beans or Pease, which require hoeing two or three times, which if done in very dry Weather, will be of great Use to destroy the Couch Grass. Where this Method is not observed, it is common to see large Tracts of Land, which are sown with Grain, so much overrun with Grass, that many times the Crop doth not produce so much Grain as was sown on the Ground.

In Gardens this Grass is much easier destroyed than in large Fields, because the Ground being frequently dug, Care may be taken to pick out the Roots in digging; and if there be any left, and appear afterward, the Roots may be easily forked out; so that in one Year it may be destroyed, if proper Care be taken. But where the Ground is very full of the Roots of Couch Grass, and the Land will admit of being trenched three Spits deep, that will be the most effectual Way of destroying it, and will be cheaper than picking out the Roots by Hand; for by trenching of the Ground so deep, the Couch will be buried near two Feet, which will rot it; and turning of the Ground so deep, will be moreover of great Service to it.

This Sort of Grass, is what the College of Physicians have ordered to be used in Medicine; so that whenever Grass is prescribed, this is what is meant.

The Fox-tail Grasses are frequently found in Pastures intermixed with other Kinds, but are never sown separately. These do very well for Fodder or Hay, and are useful Kinds of Grass.

The Bearded wild Oats, or Haver, are frequently found amongst Corn in several Parts of England, where sometimes they become troublesome Weeds; for if they are not drawn out of the Corn before it is ripe, it will be difficult to be separated from the Corn in the Barn: but as they are annual Plants, so they may be easily destroyed with a little Care.

The striped Grass is preserved in many Gardens for the Beauty of its variegated Leaves, which continue fresh the greatest Part of the Year. This Sort is easily propagated by parting the Roots, either in Spring or Autumn; for every Off-set will increase to be a large Root in one Year's time. It will grow on any Soil, or in any Situation, so may be planted in any abject Part of the Garden where it will thrive, and afford an agreeable Variety. This Sort is by many Persons called Ribbon Grass, from the Stripes of White and

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Green, which run the whole Length of the Blade, like the Stripes in some Ribbons.

For the farther Management of Grass, see Pasture, and Meadow.

Clover Grass, see Trifolium.

Saint Foyn, see Onobrychis.

La Lucerne, see Medica.

Nonesuch, see Melilotus.

Trefoil, see Trifolium.

Spurrey, see Spargula.

GRANADILLA.

To this Article must be added;

14. GRANADILLA folio hastato, flore ceruleo majore. Houst. Passion-flower with a spear-pointed Leaf, and a large blue Flower.

15. GRANADILLA folio oblongo serrato, flore purpureo. Houst. Passion-flower with an oblong serrated Leaf, and a purple Flower.

16. GRANADILLA folio glabro, tricuspidi, & angusto, flore virescenti minimo. Tourn. Passion-flower, with a narrow smooth three-pointed Leaf, and a small greenish Flower.

17. GRANADILLA, quæ COANENEPIILLI, seu CONTRAYERVA Hernand. Houst. Passion-flower, or Contrayerva of Hernandez.

The Seeds of these four Sorts of Passion-flowers were sent from La Vera Cruz, by the late Dr. William Houstoun; the fourteenth and fifteenth Sorts are new, and have not been mentioned by any Botanic Writer, before they were discovered by the Doctor. Since which time the fifteenth Sort has been figured and described by Mr. John Martyn, Professor of Botany at Cambridge, in his fourth Decade of rare Plants. These two Sorts produce very beautiful Flowers; and the fifteenth continues flowering near three Months, which renders it more valuable. The other two Sorts have little Beauty in their Flowers; so are only preserved by those who are curious in the Study of Botany. These Plants are tender, and require to be placed in a Bark-stove; where they will climb to a great Height, and produce great Plenty of Flowers. There is now an Espalier in a very large Stove in the Physic-Garden, which is sixteen Feet high, and covered over with these Kinds of Passion-flowers, which has a fine Effect. But as the Plants will soon root through these Pots into the Bark-bed, so, if they are disturbed, it will greatly check their Growth; therefore they should be permitted to remain in the Bark: Or if, in the first making of the Stove, a Border be taken out of the Pit (on the Back-side next the Flues) about two Feet wide, which may be boarded up with strong Ship-plank, and this Border filled with Earth, into which these Plants may be planted; they may remain several Years undisturbed in these Borders, and will make a fine Appearance. The Reason of my advising this Border to be divided from the Bark-pit with Boards, rather than by a Brick-wall, is, that the Heat of the Bark may more easily warm the Borders, which will be of great Service to the Plants.

These four Sorts may be propagated from Seeds, which should be sown on a Bed in the

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Spring,

Spring, and managed as hath been directed in the *Dictionary* for the eighth, ninth, and tenth Sorts; to which the Reader is referred, to avoid Repetition. They may be also propagated by laying down of the Branches, which will take Root in three or four Months; when they may be taken from the old Plants, and planted into Pots filled with rich Earth, and treated in the same Manner as the seeding Plants. These Plants flower in *June, July, and August*, and sometimes produce ripe Fruit in *England*.

GUAIABARA, Sea-side Grape, vulgô.

The Characters are;

It hath a Flower consisting of six Leaves, which expand in Form of a Rose; in the Centre arises the Pointal, which afterward becomes a pulpy Fruit, inclosing one roundish Stone terminating in a Point.

The Species are;

1. *GUAIABARA alia racemosa, foliis oblongis, Plum. Manus.* Sea-side Grape with oblong Leaves.

2. *GUAIABARA alia racemosa, foliis latissimis. Houst.* Sea-side Grape with very broad Leaves.

3. *GUAIABARA foliis minoribus & longioribus, fructu racemoso minimo atro-purpureo. Houst.* Sea-side Grape with smaller and longer Leaves, and the least dark purple Fruit growing in Bunches.

The second Sort is very common in *Jamaica*, and all the *Caribee Islands*; where it grows on the sandy Shores, from whence it had the Name of *Sea-side Grapes*, the Fruit growing in a long slender Bunch. This Fruit is commonly sold in the Markets in *Barbadoes*, where it is much esteemed.

The first Sort is common at *Cartagena* in *New Spain*, from whence I received the Seeds; which were collected by the late Dr. *William Houstoun*.

The third Sort was also discovered by the same Gentleman at *la Vera Cruz*; who sent the Seeds into *England*, from which several Plants were raised. These two Sorts also grow on the sandy Shores near the Sea.

These Shrubs do usually grow about ten or twelve Feet high, and have several Trunks arising from the same Root, so that they appear like large Bushes. The Fruit comes out from the Wings of the Leaves in long slender Bunches, which are about the Size of an ordinary Raisin in the second Sort; but the first and third Sorts produce very small Fruit, which are seldom gathered. The second Sort is figured in *Lobel's History of Plants* under the Title of *Populus Novi Orbis*.

All these Sorts are propagated by Seeds, which should be sown in small Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark: in about a Month after, the Plants will appear above Ground, when they must be frequently watered and cleared from Weeds: if the Weather proves warm, the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants; but if the Nights are cold, the Glasses must be covered with Mats every Night, to preserve

a gentle Warmth in the Bed. When the Plants are about two Inches high, they must be shaken out of the Pots, and separated carefully, planting each into a small Pot filled with light rich Earth, and then plunged into the Hot-bed again, observing to screen them from the Sun every Day, until they have taken Root; after which Time they should have Air admitted to them every Day, in Proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed; they must also be frequently watered in hot Weather. When the Plants have filled the Pots with their Roots, they must be transplanted into larger Pots, and plunged again into the Hot-bed, where they may remain till *Michaelmas*; at which Time they should be removed into the Stove, and plunged into the Tan. During the Winter Season, they must be kept very warm, and frequently refreshed with Water, but it must not be given to them in large Quantities; but in Summer, they should have fresh Air admitted to them in warm Weather, and watered more plentifully, but they must constantly remain in the Stove; for they are too tender to live in the open Air in this Country in the warmest Season. These Plants having thick, strong, green Leaves, make an agreeable Appearance in the Stoves; and it may be expected to see the Fruit brought to Perfection in some of the Stoves which have been lately erected.

GUANABANUS.

This is the *American* Name by which these Fruits are called, and by Father *Plumier* is made the generical Name; but as many of these Sorts are enumerated in the First Volume of the *Gardeners Dictionary*, under the Title *Anona*; so I shall only take Leave to add a few Sorts, which have been lately introduced into the *English* Gardens.

1. *GUANABANUS folio amplissimo, flore roseo, fructu purpureo squamato.* Cherimonias with a rose-coloured Flower, and a purple scaly Fruit.

2. *GUANABANUS, latifolia, flore albo, fructu aureo squamato.* Cherimonias with a broad Leaf, a white Flower, and a golden scaly Fruit.

3. *GUANABANUS persea folio, flore intus albo, exterius virescente, fructu nigricante squamato, vulgo Cherimolia. Feuill. Obs.* Guanabanus with an avocado-pear Leaf, and Flowers which are white within, and greenish on the Outside, and a scaly blackish Fruit, commonly called *Cherimolia* or *Cherimonias*, in the *Spanish West-Indies*.

These three Sorts grow in several Parts of the *Spanish West-Indies*, where they are cultivated for their Fruits, which are greatly esteemed by the Inhabitants.

They are very tender Plants, so must be preserved in the warmest Bark-stove, otherwise they will not live in this Country. They are propagated by Seeds, which should be sown in Pots filled with rich light Earth, and plunged into a Hot-bed of Tanners Bark; when the Plants are come up two Inches high, they should be transplanted into separate small Pots filled with light rich Earth, and plunged into

into the Hot-bed again, observing to water and shade them until they have taken Root; after which Time they must be treated, as hath been directed for the *Anona's*, in the former Volume of the *Gardeners Dictionary*.

The third Sort is much cultivated in the Gardens in *Peru*, and several other Places in the *Spanish West-Indies*, where the Fruit is greatly esteemed, being by many Persons preferred to the Pine-apple. This Tree seldom grows above twelve or fourteen Feet high in the *West-Indies*: so that we may hope to see the Fruit in Perfection in this Country in a few Years; because, as the Tree is of humble Growth, it may be contained in the warmest Stoves.

The Seeds of this Kind were brought into *England* in the Year 1734, from the *Spanish West-Indies*, by a very curious Gentleman; from which many Plants have been raised, which have flourished greatly, where proper Care was taken; so that there are many Plants already [Mar. 1738.] eight or nine Feet high, which may be expected to produce Fruit in a Year or two at farthest. This is propagated by Seeds, which must be sown and managed as is directed for the former Sorts, and must be constantly preserved in the Bark-stove.

GUAZUMA, Bastard Cedar Tree, *vulgô*.

The Characters are,

It hath a regular Flower consisting of five Leaves, which are hollowed like a Spoon at their Base, but at their Tops are divided into two Parts, like a Fork. The Flower-cup consists of three Leaves, from whence arises the Pointal, which afterward becomes a roundish warted Fruit, which has five Cells inclosing many Seeds.

The Species are,

1. GUAZUMA *arbor ulmi-folia, fructu ex purpura nigro*. Plum. Nov. Gen. The Bastard Cedar Tree, *vulgô*.

2. GUAZUMA *frutex chamædryfolia, fructu lanuginoso, major*. Plum. Nov. Gen. Shrubby Guazuma with a ground-pine Leaf, and a larger woolly Fruit.

3. GUAZUMA *frutex, Chamædryfolia, fructu lanuginoso minor*. Plum. Nov. Gen. Shrubby Guazuma with a ground-pine Leaf and a lesser woolly Fruit.

The first Sort grows plentifully in the low Lands in *Jamaica*, where it rises to the Height of forty or fifty Feet, and has a large Trunk. The Timber of this Tree is cut into Staves, for Casks of all sorts, and used for many other Purposes. The Fruit is eat by Cattle as it falls from the Trees, and is esteemed very good to fatten them: so that the Planters often leave these Trees standing in their Savannas, when they clear them from all other Wood; because, when there is a Scarcity of Grass and other Food, these Fruit are a great Support to their large Cattle.

The other two Sorts are pretty common in several Parts of the *West-Indies*, where they grow about ten or twelve Feet high; but are of little Use to the Inhabitants.

These Plants may be propagated by Seed, which should be sown early in the Spring, in small Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark: these Pots of Earth must be frequently watered to promote the Vegetation of the Seed; and if the Nights prove cold, the Glasses of the Hot-bed must be covered with Mats, to preserve a moderate Warmth in the Bed; but in the Day-time, when the Sun shines warm, the Glasses should be raised, to let the Steam which arises from the Bed, pass off. When the Plants appear above Ground, they must be carefully cleared from Weeds, and often refreshed with Water; and the Glasses must be raised to admit fresh Air to them, otherwise they will draw up too weak: and when they are about three Inches high, they must be shaken out of the Pots, and parted carefully, planting each into a separate small Pot filled with light fresh Earth, and then plunged into the Hot-bed again, being careful to screen them from the Heat of the Sun, until they have taken new Root; after which Time they must have fresh Air admitted to them every Day, in proportion to the Warmth of the Season, and the Heat of the Bed in which they are placed; they must also be frequently refreshed with Water in hot Weather, which will greatly promote their Growth. In this Bed the Plants may remain all the Summer, being careful to keep them clear from the Weeds; and when the Plants have filled the small Pots with their Roots, they should be shaken out, and their Roots trimmed, and then put into Pots a Size larger. About Michaelmas the Plants must be removed into the Stove, and plunged into the Tan in a warm Part of the Stove. During the Winter Season they will not require so much Water as in Summer; but they must be frequently refreshed with a little Water, especially if the Stove is kept warm. If their Leaves should contract Filth, it must be carefully washed off with a Sponge; for if it is suffered to remain on them, it will greatly injure the Plants. These Plants being very tender, they must constantly remain in the Stoves, giving them a good Share of fresh Air in Summer; but in Winter they must be kept very warm, otherwise they will not live in this Country; but if they are carefully managed, they will thrive very well, and afford an agreeable Variety in the Stove, amongst other tender exotic Plants of the same Countries.

GUIDONIA.

To this Article must be added,

1. GUIDONIA *ulmi foliis, flore niveo*. Plum. Nov. Gen. Guidonia with Elm Leaves, and a white Flower.

2. GUIDONIA *aurantii foliis, aculeata*. Plum. Nov. Gen. Prickly Guidonia, with Orange Leaves.

3. GUIDONIA *nucis juglandis foliis, major*. Plum. Nov. Gen. Greater Guidonia, with Walnut-tree Leaves.

4. *GUIDONIA nucis juglandis foliis, minor.*
Plum. Nov. Gen. Lesser Guidonia, with Walnut-tree Leaves.

These four Sorts are tenderer than that which is mentioned in the former Volume of the *Gardeners Dictionary*: so must be placed in the Bark-stove, especially while they are young, which will greatly forward their Growth: they may be all propagated by Seeds, which should be sown in Pots filled with light fresh Earth early in the Spring, and plunged into a Hot-bed of Tanners-bark. When the Plants come up, they must be duly watered, and clear'd from Weeds, in the Day-time. When the Weather is warm, the Glasses of the Hot-bed must be tilted with Stones, to admit fresh Air to the Plants; but if the Nights prove cold, the Glasses must be covered with Mats, to keep the Bed warm. When the Plants are about three Inches high, they should be carefully taken up, and each transplanted into a separate Pot, and plunged into the Hot-bed again, observing to shade them from the Sun until they have taken Root; after which Time they must be treated as hath been directed for the *Guazuma*. The two first Winters, these Plants may be placed in the Bark-stove; but when they have acquired Strength, they may be inured to bear the open Air in the warmest Part of the Summer; and in Winter they may be placed on Stands in the dry Stove, where, if they are kept in a moderate Temperature of Warmth, they will thrive very well, and produce their Flowers every Year in *July* and *August*; but they rarely perfect Seeds in this Country.

They may be also propagated by laying their Branches down into the Earth: this should be done in *April*; and if they are duly watered, they will be rooted enough to transplant by the following Year; when they should be taken off and transplanted into Pots, and managed as is directed for the seedling Plants. But when it is proposed to increase these Plants after this Manner, it will be proper to encourage some Shoots near the Bottom of the Stems of the old Plants (from whence they are very apt to send forth Shoots); because these will be much more convenient to make Layers, than those which are placed higher from the Earth.

Some of these Plants will grow from Cuttings, when they are rightly managed. These Cuttings should be planted in the Beginning of *April* (just before the Plants begin to shoot) in Pots filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root, which will be in about two Months, if they succeed; when they may be inured to bear the open Air by degrees, and in *August* they may be transplanted into separate Pots, and afterward must be managed as is before directed for the seedling Plants and Layers. The Plants thus raised, will produce Flowers much sooner than those raised from Seed; but they seldom grow to make so large Plants as those do.

GUNDELIA.

This Plant was so named by Dr. *TOURNEFORT*, in Honour to Dr. *GUNDELSCHMEIMER*, who found it in his Travels in Company with Dr. *TOURNEFORT* in the *Levant*.

The Characters are;

It is a Plant with a flosculous Flower, gathered into a kind of Head, consisting of many Florets, coming out of a common Empalement, and sitting on the Embryos of the Seed, which are hid in the Cells of the Empalement, and afterward becomes roundish Seeds ending in a Point.

The Varieties of this Plant are;

1. *GUNDELIA orientalis, acanthi aculeati foliis, floribus intense purpureis, capite aranæosa lanugine obsito.* *Tourn. Cor.* Eastern Gundelia, with a prickly Bears-breech Leaf, deep purple Flowers, and an Head woven, as it were, with a Cobweb.

2. *GUNDELIA orientalis, acanthi aculeati folio, capite glabro.* *Tourn. Cor.* Eastern Gundelia, with a prickly Bears-breech Leaf, and a smooth Head.

The second Sort is figured and described in the second Volume of Dr. *Tournefort's Travels in the Levant*. It was discovered, as I said, by Dr. *Gundelschmeimer* near *Baibout*, in their Journey to *Armenia*, growing in dry stony Places.

The first sort seems to be a Variety of the second, and was found intermixed with it in the same Places.

These Plants are propagated by Seed, which should be sown the Beginning of *March*, in a warm dry Border of fresh but lean Earth; for they will not live long in a moist rich Soil. When the Plants come up, they must be carefully cleared from Weeds; as they grow large, so they should be thinned and transplanted out in warm Borders, leaving the Plants which are designed to remain about two Feet asunder, that they may have Room to spread. After this there is no other Culture required, but to keep them clear from Weeds; and in two Years they will produce their Flowers, when they will make a fine Appearance amongst other hardy Flowers in the Pleasure-garden; but these Plants rarely perfect Seeds in this Country, which is the Case of several other of the headed Plants; for if the Season should prove moist at the Time when the Plants are in Flower, the Wet soaks into the Empalement where the Embryos of the Seed are lodged, which prevents their ripening, so that the Seeds must be procured from Abroad.

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HÆMANTHUS. Bloodflower.

To this Article must be added;

1. *HÆMANTHUS colchici foliis, perianthio herbaceo.* *Hort. Elth.* Bloodflower with meadow-saffron Leaves, and an herbaceous Empalement.

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This Plant is a Native of *Africa*, from whence it was brought to the curious Garden of Mr. *Beaumont* in *Holland*, where it was propagated, and has been since distributed to many curious Persons in several Parts of *Europe*. It is propagated by Off-sets, which should be taken off in *May*, at which Time these Plants begin to lose their Leaves; for they are ready to put out new Leaves in *July*, and continue growing all the Autumn and Winter; but toward the End of *May* the Leaves begin to decay; at which time the Plants should be new potted, and if they have any Off-sets which are sufficiently rooted, they must be taken off, and planted in Pots filled with light rich Earth. In transplanting of these Plants, there must be particular Care to lay some Stones and Rubbish in the Bottom of the Pots to let the Moisture pass off; for if the Wet is detained in the Pots, it will soon cause the Roots to perish. During the Season of their Inactivity, which is commonly from the Beginning of *May* to the Beginning of *July*, they must not have too much Water, lest it rot their Roots; but when they are in Vigour, they will require a little more Wet.

These Plants must be constantly kept in the dry Stoves; for they do not thrive well, if they are set abroad, even in the warmest Part of the Summer; so that it is much the better Method to let them remain in the Stove, with *Euphorbiums*, and other tender succulent Plants, which require a large Share of free Air in warm Weather; in which Situation they will thrive exceeding well, and will annually produce their beautiful Flowers, which make a fine Appearance among other rare Plants. During the Winter Season they must be kept in a moderate Temperature of Heat, and should be frequently refreshed with Water; but it must not be given to them in large Quantities, lest it rot them. This Plant is not constant in the Time of its flowering, but the most usual Season is in *July* or *August*; but when it flowers in the Spring, it will sometimes perfect Seeds in this Country; which, if sown soon after they are ripe, and preserved in the Stove till Spring, and then placed in a Hot-bed of Tanners-bark, will grow very well; and by this Method a much greater Increase of the Plants may be obtained in a Year or two, than could be by Off-sets in many Years.

HEDYSARUM, French Honeyfuckle.

To this Article must be added;

1. HEDYSARUM *annuum*, *siliqua aspera undulata intorta*. Tourn. Annual French Honeyfuckle, with a rough waved and wreathed Pod.

2. HEDYSARUM *Alpinum*, *siliqua lævi, flore purpureo-caruleo*. Tourn. Alpine French Honeyfuckle, with a smooth Pod and a blue purple Flower.

3. HEDYSARUM *Alpinum*, *siliqua lævi, flore albido*. Tourn. Alpine French Honeyfuckle, with a smooth Pod, and a white Flower.

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4. HEDYSARUM *minus diphyllum, flore luteo*. Sloan. Cat. Smaller two-leav'd French Honeyfuckle, with a yellow Flower.

5. HEDYSARUM *triphyllum fruticosum, flore purpureo, siliqua varie distorta*. Sloan. Cat. Three-leav'd shrubby French Honeyfuckle, with a purple Flower, and a variously distorted Pod.

6. HEDYSARUM *triphyllum fruticosum minus*. Sloan. Cat. Smaller three-leav'd shrubby French Honeyfuckle.

7. HEDYSARUM *triphyllum fruticosum spinum, flore purpureo*. Sloan. Cat. Three-leav'd shrubby dwarf French Honeyfuckles with a purple Flower.

8. HEDYSARUM *annuum majus Zeylanicum, mimosæ foliis*. Tourn. The greater annual French Honeyfuckle of Zeylon, with Leaves like the sensitive Plant.

9. HEDYSARUM *annuum minus Zeylanicum, mimosæ foliis*. Tourn. The lesser annual French Honeyfuckle of Zeylon, with Leaves like the sensitive Plant.

10. HEDYSARUM *arborescens, foliis mimosæ*. Plum. Cat. Shrubby French Honeyfuckle, with Leaves like the sensitive Plant.

11. HEDYSARUM *caule hirsuto, mimosæ foliis alatis, pinnis acutis minimis gramineis*. Sloan. Cat. French Honeyfuckle with a hairy Stalk, winged Leaves like the sensitive Plant, and smallest pointed grass-like Wings.

12. HEDYSARUM *minimum procumbens, foliis pinnatis subrotundis, flore luteo*. Houst. Smaller trailing French Honeyfuckle, with roundish winged Leaves, and a yellow Flower.

13. HEDYSARUM *triphyllum frutescens, foliis subrotundis & subtus sericeis, flore purpureo*. Houst. Three-leav'd shrubby French Honeyfuckle, with roundish Leaves, which are silky underneath, and a purple Flower.

14. HEDYSARUM *triphyllum humile, flore conglomerato, calyce villoso*. Houst. Dwarf three-leav'd French Honeyfuckle, with Flowers growing in Clusters, and a hairy Cup.

15. HEDYSARUM *triphyllum procumbens, foliis rotundioribus & minoribus, siliquis tenuibus & intortis*. Houst. Trailing three-leav'd French Honeyfuckle, with smaller and rounder Leaves, and narrow intorted Pods.

16. HEDYSARUM *triphyllum, caule triangulari, foliis mucronatis, siliquis tenuibus intortis*. Houst. Three-leav'd French Honeyfuckle, with a triangular Stalk, pointed Leaves, and a narrow intorted Pod.

17. HEDYSARUM *triphyllum annuum erectum, siliquis intortis & ad extremitatem amplioribus*. Houst. Three-leav'd annual upright French Honeyfuckle, with intorted Pods, which are broad at their Extremity.

18. HEDYSARUM *triphyllum Americanum scandens, flore purpureo*. Three-leav'd climbing American French Honeyfuckle, with a purple Flower.

The first, second and third Sorts are very hardy Plants, so will live in the open Air in this Country. These are propagated by Seeds, which must be sown in *March*, in a Bed or Border of light Earth, in the Place where

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they are designed to remain; because, as they shoot their Roots deep into the Earth, so they do not bear transplanting well. When the Plants appear above Ground, they must be carefully cleared from Weeds, which, if suffered to grow, would soon overbear the young Plants, and destroy them. As the Plants advance in their Growth, they should be thinned where they are too close, leaving those which are designed to flower, about a Foot or eighteen Inches apart. In dry Weather they will require some Water; and to keep them clear from Weeds, is all the Culture they want. In *July* they will flower, and, if the Autumn proves favourable, they will perfect their Seeds in *September*.

The fourth, fifth, sixth, seventh and eleventh Sorts, were discovered by Sir *Hans Sloane*, Bart. in *Jamaica*, from whence the Seeds have been sent into *England*, and have succeeded in several curious Gardens. These are all of them annual Plants, notwithstanding some of them grow shrubby, and will rise to the Height of eight or nine Feet; for they perish as soon as they have ripened their Seeds in the Country of their natural Growth.

The eighth and ninth Sorts were brought from *Ceylon* by the learned Botanist, Dr. *Herman*, to the *Physic-garden* at *Leyden*; but they are not peculiar to that Country, for I have received Seeds of both these Sorts from several Parts of *America*, which have flourished in the *Physic-garden* at *Chelsea*.

The tenth Sort was discovered by Father *Plumier*, in some of the *French Settlements* in *America*. The Seeds of this Sort were sent me from *Campechy*, by the late Dr. *William Houstoun*.

The twelfth, thirteenth, fourteenth, fifteenth, sixteenth and seventeenth Sorts, were discovered by the late Dr. *William Houstoun* at *La Vera Cruz*, *Jamaica*, *Campechy*, and *Cartagena*, from which Places he sent the Seeds and Specimens into *England*. The eighteenth Sort I received from *South-Carolina*, which grew in the *Physic-garden* at *Chelsea*.

These are most of them annual Plants, and as they are Natives of warm Countries, so they require to be tenderly managed, to make them thrive in this Country. The Seeds of these Plants should be sown on a Hot-bed the Beginning of *March*; and when the Plants are about two Inches high, they must be carefully transplanted each into a separate small Pot filled with light rich Earth, and then plunged into a Hot-bed of *Tanners-bark*, being careful to shade them from the Sun until they have taken Root; after which Time they must have fresh Air admitted to them every Day by tilting the Glasses, in proportion to the Heat of the Weather: They must also be frequently refreshed with Water, which will greatly promote their Growth. When the Plants have filled these Pots with their Roots, they should be planted into larger; and as those Sorts which grow upright, rise to touch the Glasses of the Hot-bed, so they should be removed into the Bark-bed in the

Stove, or into a Glass-case, where they may have Room to grow. If these Plants are brought forward early in the Spring, they will begin to flower by the Beginning of *July*, and then they will have Time to ripen their Seeds before Winter; for if they are backward in flowering, they seldom perfect their Seeds in this Country.

The eighth Sort rarely perfects Seed in *England*; for it generally grows to be five or six Feet high, and is always late before it flowers; but the ninth Sort will produce good Seeds every Year, if it is rightly managed.

The thirteenth and eighteenth Sorts will abide two Years, provided they are placed in a warm Stove in Winter; and these Plants, when they are kept thro' the Winter, will flower early the following Summer, so that good Seeds may be obtained from them.

All these Plants afford an agreeable Variety in the Stove amongst other exotic Plants in Autumn, when they are in Flower; so that they are preserved by those who are curious in Botany.

HELENIASTRUM, Bastard Elecampane.

The Characters are;

It hath a compound radiated Flower, consisting of many Florets, which are hermaphrodite, and of Semiflorets, which are female: The Ovaries stand on a naked Placenta, each bearing an antient Crown. All these Parts are included in a simple Empalement, which expands, and is cut almost to the Bottom in several Parts.

The Species are;

1. HELENIASTRUM folio longiore & angustiore. *Vaill. Mem.* Bastard Elecampane, with a longer and narrower Leaf.

2. HELENIASTRUM folio brevior & latior. *Vaill. Mem.* Bastard Elecampane, with a broader and shorter Leaf.

These Plants are both of them Natives of *America*; the Seeds of both Sorts I have received from *Virginia* and *New England*, where they grow wild in great Plenty in the Woods and other shady Places, where the Ground is moist. They may be propagated by Seeds, or by parting of their Roots; but the latter is generally practised in this Country, because they seldom perfect their Seeds here; but if Seeds are procured from Abroad, they should be sown the Beginning of *March* on a warm Border of light Earth: And if the Seeds should not come up the first Year, the Ground should not be disturbed; because they often remain a whole Year under Ground, before the Plants appear: in which Case there is nothing more to be done, but to keep the Ground clear from Weeds, and wait until the Plants come up: when they appear, if the Season proves dry, they must be often watered, which will greatly forward their Growth; and where the Plants come up too close to each other, they should be thinned and transplanted out into Beds a Foot asunder every way, being careful to shade them until they have taken Root, as also to water them in dry Weather. In the Autumn these Plants will produce their Flowers, which will continue

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till the Frost prevents them; and their Roots will abide many Years, and afford many Offsets, by which they may be increased.

The best Season to transplant the old Roots, and to part them for Increase, is the Beginning of March, just before they begin to shoot; but if the Spring should prove dry, they must be duly watered, otherwise they will not produce many Flowers the same Year. These Plants should not be removed oftener than every other Year; for, as they do not spread their Roots very wide, so they will continue within due Compass two Years very well. They delight in a Soil rather moist than dry, provided it be not too strong, or holds the Wet in Winter: but if they are planted in a dry Soil, they must be often and plentifully watered in dry Weather, to make them produce Plenty of Flowers.

These Plants generally rise about three Feet and a half, or four Feet high; so should be planted in the Middle of large Borders, intermixed with Flowers of the same Growth, where they will make a pretty Variety, because they continue a long time in Flower: and as they require very little Care to cultivate them, so they deserve a Place in every large Garden. Their Flowers resemble those of the smaller Kinds of Sunflower, and have been by some Botanists ranged in that Genus. The Time of their Flowering is from June, until the Frost stops them.

HELENIUM, Elecampane.

The Characters are;

It hath a radiated Flower, whose Florets are hermaphrodite, but the Semiflorets are female; both these are yellow; the Ovaries, which rest on a naked Placenta, are crowned with Down: all these Parts are included in a scaly Cup. To these Notes may be added, the Leaves growing alternately on the Stalks, and the Flowers grow on the Top of the Branches.

The Species are;

1. HELENIUM vulgare. C. B. P. Common Elecampane.

2. HELENIUM virgæ pastoris folio, subtus incano & tomentoso. Vaill. Mem. Yellow Starwort, with a wild Teasel-leaf, which is hoary and woolly underneath.

3. HELENIUM villosum, conyzæ folio, magno flore. Vaill. Mem. Yellow hairy Starwort, with a fleabane Leaf, and a large Flower.

4. HELENIUM conyzæ folio, prægrandi flore, calyce pilosissimo. Vaill. Mem. Yellow Starwort, with a fleabane Leaf, and a larger Flower, and a very hairy Cup.

5. HELENIUM Creticum, conyzæ folio, asphodeli radice. Vaill. Mem. Yellow Starwort of Crete, with a fleabane Leaf, and an asphodel Root.

6. HELENIUM palustre, folio longiori lanuginoso. Vaill. Mem. Marsh yellow Starwort, with a longer woolly Leaf.

7. HELENIUM conyzæ folio lanuginoso, radice odorâ. Vaill. Mem. Yellow Starwort, with a woolly fleabane Leaf, and a sweet-smelling Root.

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8. HELENIUM palustre villosum odoratum, conyzæ folio. Vaill. Mem. Hairy marsh sweet-smelling Starwort, with a fleabane Leaf.

9. HELENIUM montanum villosum angustifolium, flore magno singulari. Vaill. Mem. Hairy mountain yellow Starwort, with a narrow Leaf, and a large single Flower.

10. HELENIUM lanuginosum angustifolium, summo caule ramoso. Vaill. Mem. Woolly yellow Starwort, with a narrow Leaf, and branching at the Top of the Stalks.

11. HELENIUM pratense autumnale, conyzæ foliis caulem amplexantibus. Vaill. Meadow yellow Starwort of the Autumn, with fleabane Leaves encompassing the Stalks, commonly called Conyza media.

12. HELENIUM birsutum, salicis folio. Vaill. Mem. Hairy yellow Starwort, with a willow Leaf.

13. HELENIUM montanum, salicis folio subtus incano. Vaill. Mem. Mountain yellow Starwort, with a willow Leaf, which is hoary underneath.

14. HELENIUM salicis folio glabro. Vaill. Mem. Yellow Starwort, with a smooth willow Leaf.

15. HELENIUM spirææ folio. Vaill. Mem. Yellow Starwort, with a spirea Leaf.

16. HELENIUM glabrum, myrti lato, serrato, cuspidatoque folio. Vaill. Mem. Smooth yellow Starwort, with a broad, sawed, and pointed myrtle Leaf.

17. HELENIUM cisti folio non crenato, magno flore. Vaill. Mem. Yellow Starwort, with a cistus Leaf, and a large Flower.

18. HELENIUM lanuginosum, pilosellæ foliis. Vaill. Mem. Woolly yellow Starwort, with mouse-ear Leaves.

19. HELENIUM palustre subbirsutum, foliis calthæ. Vaill. Mem. Marsh roughish yellow Starwort, with marygold Leaves.

20. HELENIUM salicis folio, floribus parvis, fere umbellatis. Vaill. Mem. Yellow Starwort, with a willow Leaf, and small Flowers growing almost in an Umbel.

21. HELENIUM palustre annuum, foliis crispis. Vaill. Annual marsh yellow Starwort, with curled Leaves, commonly called Marsh Fleabane.

22. HELENIUM palustre annuum, hyssopi foliis crispis. Vaill. Mem. Marsh annual yellow Starwort, with curled hyssop Leaves.

23. HELENIUM ramosum, cauliculis sparsis, calthæ arvensis folio. Vaill. Mem. Branching yellow Starwort, with sparfe Stalks, and a field-marygold Leaf.

24. HELENIUM Egyptiacum tomentosum & incanum, bellidioides, foliis crispis. D. Lippi. Hoary woolly Egyptian yellow Starwort, with curled daizy Leaves.

25. HELENIUM Egyptiacum tomentosum & incanum, polii folio. D. Lippi. Hoary woolly Egyptian yellow Starwort, with a mountain-poley Leaf.

26. HELENIUM bellidioides, foliis amplis, asphodeli radice. Vaill. Mem. Yellow Starwort, with large daizy Leaves, and an asphodel Root.

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27. *HELENium perenne glabrum byssopifolium*. Vaill. Mem. Smooth perennial yellow Starwort, with an hyssop Leaf.

28. *HELENium perenne glabrum, folio crasso in summo tricuspidato*. Vaill. Mem. Smooth perennial yellow Starwort, with a thick three-pointed Leaf.

29. *HELENium rorismarini crassis, obtusis, confertisque foliis*. Vaill. Mem. Yellow Starwort with thick blunt Leaves growing in Clusters, commonly called Golden Samphire.

30. *HELENium saxatile, byssopi folio villoso & glutinoso*. Vaill. Mem. Rock yellow Starwort, with a hairy clammy hyssop Leaf.

The first Sort is the true Elecampane, which is used in Medicine: it grows wild in moist Fields and Meadows in several Parts of *England*, and is pretty much cultivated in Gardens near *London*, to furnish the Shops with the Roots, which is the only Part of the Plant in Use.

This Sort may be propagated by Seeds, or from small Off-sets, which are furnished with Buds on their Tops. If you would propagate it by Seeds, they should be sown on a moist Bed of light Earth soon after they are ripe; for if they are kept long out of the Ground, they will not succeed: these Seeds generally remain in the Ground until the following Spring, when the Plants will begin to appear; at which time they must be carefully weeded, and if the Season should prove dry, they must be frequently watered, which will greatly promote their Growth. In this Bed the Plants should remain till *Michaelmas* following, being careful to keep them constantly clear from Weeds during the summer Season. Then you should prepare a Spot of Ground in proportion to the Number of Plants you have to transplant; which should be well digged, and cleansed from the Roots of all noxious Weeds; then you must carefully fork up the Roots of the seedling Plants, so as not to break them; and with a Dibble they should be planted in Rows about a Foot asunder, and nine Inches Distance in the Rows: in the planting of these Roots, you must observe to make the Holes deep enough to receive them without being bent or broken, so that the Crown of the Roots may be just under the Surface of the Ground; then close the Earth gently about them with your Feet. When the Plantation is finished, there will be no farther Care required until the Spring, when the Plants begin to shoot; at which time the Ground should be carefully houghed to clear it from Weeds, which Work must be repeated three or four times in the Spring; but always in dry Weather, which will intirely destroy the Weeds, if it be carefully performed; and when the *Elecampane* Plants have acquired Strength, they will keep the Weeds under, because their Leaves being large, will spread and cover the Ground. If the Ground is good in which the Plants are placed, the Roots will be large enough to take up the *Michaelmas* following; but if the Ground is very poor, or too dry, they should remain two Years after planting, before they are taken up for Use. Note, These

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Roots should not be taken up till the Leaves are decayed.

If you intend to propagate this Plant by Off-sets, you must take them carefully off from the old Roots at *Michaelmas* (which is the Time they are taken up for Use); so as to preserve a good Bud to each Off-set; then plant them in a well prepared Spot of Ground, in the same Manner as hath been directed for the Seedling Plants; and the following Summer they must be treated in the same Manner as those.

All these Plants are ranged under the Genus of *Aster*, by Dr. *Tournefort*, as agreeing in the Manner of their Flower and Seed with that Tribe: but as the Title of *Helenium* has been applied to the first Species by the Writers in Botany before his Time, and the outward Face of the Plant being very different from the *Starworts*, as also the Flowers being yellow; so Monsieur *Vaillant*, Professor of Botany at *Paris*, has constituted a Genus by the Name of *Helenium*, and separated all the Species which have yellow Flowers, from the *Asters*, and placed them under this Genus; for which Reason I have added the *English* Name of *yellow Starwort* to all the Species.

The eleventh Sort is very common by the Sides of Ditches and Ponds in most Parts of *England*, so is seldom planted in Gardens; because it creeps very much by the Root, and will soon overspread a large Spot of Ground, when it has once taken Root. This Sort is commonly known by the Name of *Middle Fleabane*, in *England*.

The twenty-first Sort is also very common in *England*; this is an annual Plant, which sows itself on moist Grounds, where the Water usually stands in Winter; it flowers in *July* and *August*. This Plant is placed in the Catalogue of Simples annexed to the College Dispensatory, under the Title of *Conyza minor, flore globoso*; it is also called *Pulicaria*, because they say, the Smell of this Herb will drive away Fleas.

The twenty-ninth Sort grows on the Rocks and gravelly Shores by the Sea-side, in divers Parts of *England*, and is frequently gathered and brought to the Markets for *Samphire*, and pickled as such. This is often distinguished from the true *Samphire*, by the Title of *Golden Samphire*, because the Flowers are yellow.

The other Sorts are not Natives of this Country, but are all of them hardy enough to thrive in the open Air, and several of them will grow in shady Places, and under the Drip of Trees; so that they deserve to be propagated in the *English* Gardens. They are commonly propagated by parting of their Roots, because they seldom produce good Seeds in this Country. The best Time to part their Roots is in Autumn, when their Stalks begin to decay; in doing of this, you should be careful not to divide them too small, as also to preserve some good Buds to each Off-set. These should be planted in large Borders in the Pleasure-garden, intermixed with other hardy perennial Plants; where they will require no other Culture, but to keep them clear from

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from Weeds, and to transplant the Roots every other Year, when they may be parted to increase them. In the Summer-time, when the Stalks are grown pretty high, they should have Sticks thrust into the Ground by each Root, and their Branches fastened thereto with Bais, to support them; otherwise they are often broken down by heavy Rains, or strong Winds, when they are in Flower; which renders them very unsightly in a neat Garden. Some of these Sorts begin to flower in July, and others succeed them, until the Frosts in Autumn put a Stop to their Flowering.

If these Plants are propagated by Seeds, it should be sown soon after it is ripe, in an open Bed of fresh Earth; for if the Seeds are kept out of the Ground till Spring, they seldom grow.

HELIANTHEMUM, Dwarf-cistus, or little Sunflower.

To this Article must be added;

1. **HELIANTHEMUM vulgare**, flore albo. Tourn. Common small Sunflower, with a white Flower.

2. **HELIANTHEMUM serpilli folio**, flore minore aureo odorato. Tourn. Small Sunflower, with a Mother of Thyme Leaf, and a smaller golden sweet-smelling Flower.

3. **HELIANTHEMUM angustifolium luteum**. Tourn. Yellow narrow-leav'd small Sunflower.

4. **HELIANTHEMUM foliis myrti minoris, subtus incanis**. Tourn. Small Sunflower with lesser Myrtle-leaves, which are hoary underneath.

5. **HELIANTHEMUM tenuifolium glabrum erectum**, luteo flore. Tourn. Narrow-leav'd smooth upright small Sunflower.

6. **HELIANTHEMUM tenuifolium glabrum**, luteo flore, per humum sparsum. J. B. Narrow-leav'd smooth small Sunflower, spreading on the Ground with a yellow Flower.

7. **HELIANTHEMUM folio thymi incano**. J. B. Small Sunflower, with a hoary Thyme-leaf.

8. **HELIANTHEMUM thymi folio glabro**. Tourn. Small Sunflower, with a smooth Thyme-leaf.

9. **HELIANTHEMUM ad nummulariam accedens**. J. B. Small Sunflower resembling Money-wort.

10. **HELIANTHEMUM foliis rorismarini splendentibus subtus incanis**. Tourn. Small Sunflower, with shining rosemary Leaves hoary underneath.

11. **HELIANTHEMUM Massiliense**, coridis folio. Tourn. Small Sunflower of Marseilles, with a fair low heath-pine Leaf.

12. **HELIANTHEMUM polii folio ampliore**, Lusitanicum. Tourn. Portuguese Small Sunflower, with a larger Mountain Poley-leaf.

13. **HELIANTHEMUM polii folio angustiore**, Lusitanicum. Tourn. Portuguese Small Sunflower, with a narrow Poley Mountain-leaf.

14. **HELIANTHEMUM bumilius Lusitanicum**, balimi folio nigriore, magno flore luteo. Tourn. Low Portuguese small Sunflower, with a black sea-purslane Leaf, and a large yellow Flower.

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15. **HELIANTHEMUM Algarviense**, balimi folio, flore luteo punicante macula insignito. Tourn. Small Sunflower of Algarve, with a sea-purslane Leaf, and a yellow Flower spotted with Scarlet.

16. **HELIANTHEMUM Hispanicum**, balimi folio rotundiore. Tourn. Spanish small Sunflower, with a round sea-purslane Leaf.

17. **HELIANTHEMUM Hispanicum**, balimi folio angustiore. Tourn. Spanish small Sunflower, with a narrow sea-purslane Leaf.

18. **HELIANTHEMUM Hispanicum**, balimi folio minimo. Tourn. Spanish small Sunflower, with the least sea-purslane Leaf.

19. **HELIANTHEMUM Lusitanicum**, mari folio incano, flore luteo. Tourn. Portuguese small Sunflower, with a hoary marum Leaf, and a yellow Flower.

20. **HELIANTHEMUM Lusitanicum**, mari folio incano, capitulis valde hirsutis. Tourn. Portuguese small Sunflower, with a hoary marum Leaf, and very hairy Seed-vessels.

21. **HELIANTHEMUM Lusitanicum**, majorana folio, flore luteo punicante macula insignito. Tourn. Portuguese small Sunflower, with a marjoram Leaf, and a yellow Flower spotted with Scarlet.

22. **HELIANTHEMUM Hispanicum**, balimi folio amplissimo, incano & nervoso. Tourn. Spanish small Sunflower, with a very large hoary ribbed Leaf.

23. **HELIANTHEMUM Hispanicum**, angustifolio, flore carneo. Tourn. Spanish small Sunflower, with a narrow Leaf, and a carnation Flower.

24. **HELIANTHEMUM Alpinum**, oleæ folio subtus incano. Tourn. Small Sunflower of the Alps, with an olive Leaf hoary underneath.

25. **HELIANTHEMUM Lusitanicum**, bupleuri folio, flore maculato. Tourn. Portuguese small Sunflower, with a hares-ear Leaf, and a spotted Flower.

26. **HELIANTHEMUM Lusitanicum**, globulariæ folio. Tourn. Portuguese small Sunflower, with a daizy Leaf.

27. **HELIANTHEMUM Hispanicum**, origani folio subtus incano. Tourn. Spanish small Sunflower, with an origany Leaf hoary underneath.

28. **HELIANTHEMUM plantaginis folio**, perenne. Tourn. Perennial small Sunflower, with a plantain Leaf.

29. **HELIANTHEMUM Hispanicum**, folio minimo rotundiore. Tourn. Spanish small Sunflower, with a very small round Leaf.

30. **HELIANTHEMUM Hispanicum**, ocymi folio subtus incano. Tourn. Spanish small Sunflower, with a basil Leaf hoary underneath.

31. **HELIANTHEMUM pumilum**, portulacæ marinae folio argenteo. Tourn. Dwarf small Sunflower, with a silvery sea-purslane Leaf.

32. **HELIANTHEMUM Creticum**, linariæ folio, flore croceo. Tourn. Cor. Candy small Sunflower, with a toad-flax Leaf, and a saffron Flower.

33. **HELIANTHEMUM Creticum annuum**, lato plantaginis folio, flore aureo. Tourn. Cor. Annual Candy small Sunflower, with a broad plantain Leaf, and a golden Flower.

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34. *HELIANTHEMUM Lusitanicum annuum, plantaginis folio, flore tricolore. Tourn.* Annual Portuguese small Sunflower, with a plantain Leaf, and a three-coloured Flower.

35. *HELIANTHEMUM frutescens, folio majoranæ incano. Tourn.* Shrubby small Sunflower, with a hoary marjoram Leaf.

36. *HELIANTHEMUM halimi folio brevior obtuso. Tourn.* Small Sunflower, with a shorter blunt sea-purslane Leaf.

37. *HELIANTHEMUM folio halimi latiore mucronato. Tourn.* Small Sunflower, with a broader sharp-pointed Leaf.

38. *HELIANTHEMUM Americanum frutescens, portulacæ folio. Plum. Cat.* Shrubby American small Sunflower, with a purslane Leaf.

The first Sort here mentioned is sometimes found wild in *England*, and is only a Variety of the common Sort, differing only in the Colour of the Flower.

The twenty-seven Sorts next following grow wild in *Portugal*, *Spain*, the *South* of *France*, and the *Alps*. These are all of them abiding Plants, which may be propagated by Seeds, in the Manner directed in the first Volume of the *Gardeners Dictionary*; and if they are planted on a warm Border, or on a sloping Bank, which is exposed to the *South*, they will live in the open Air in this Country very well. As these Plants require very little Trouble to cultivate them, so they merit a Place in every large Garden; where if they are properly disposed, they will afford an agreeable Variety.

These Plants should not be planted in a rich Soil; for they naturally grow on chalky Hills, or stony and gravelly Places, where they flower much better, and the Plants will continue longer, than when they grow in a rich Earth. As all these Plants are of humble Growth, and spread their Branches near the Ground; so they should not be placed among tall-growing Plants, which will over-bear them, nor should large Weeds be permitted to remain amongst them, because they will greatly weaken the Plants, and prevent their flowering.

The twenty-ninth, thirtieth, thirty-first, and thirty-second Sorts, are of humbler Growth than the former Sorts, and seldom abide long; so that their Seeds should be carefully saved, and sown to raise a Supply of young Plants to preserve their Kinds.

The thirty-third and thirty-fourth Sorts are annual Plants, so that their Seeds must be sown every Season, as was directed in the former Volume of the *Gardeners Dictionary*, for the three annual Kinds there mentioned. These Seeds must be sown in the Places where they are designed to remain, for the Plants do not succeed well when they are transplanted; all the Culture they require, is to keep them constantly clear from Weeds; and where the Plants are too near together, to thin them: with this Management they will produce their Flowers, and perfect their Seeds; which, if permitted to scatter, will produce young Plants in Autumn; which in a warm Situation

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will live through the Winter, and come early to flower the following Spring.

The thirty-fifth, thirty-sixth, and thirty-seventh Sorts, are shrubby Plants, which rise to the Height of four or five Feet; these are preserved in Pots, and removed into the Green-house in Winter, being too tender to live in the open Air in this Country throughout the Year. They are usually propagated by Cuttings, because they seldom perfect Seeds in *England*; the best Time to plant the Cuttings, is in the Middle, or latter End of *June*, after the Plants have been exposed in the open Air a sufficient time to harden the Shoots; for if they are taken off soon after the Plants are removed out of the Green-house, the Shoots are generally too weak to make Cuttings. They should be planted in a shady Border of light Earth, and frequently refreshed with Water; in about two Months the Cuttings will be sufficiently rooted to transplant, when they should be carefully taken up with Balls of Earth to their Roots, and each planted in a separate small Pot, filled with light fresh Earth, and placed in a shady Situation, until they have taken new Root; after which time they may be placed amongst other hardy exotic Plants in a sheltered Situation; where they may remain until the Middle of *October*, when they must be removed into the Green-house: during the winter Season, these Plants should have as much free Air as possible in mild Weather, and will require to be often watered; and in the summer Season they must be removed into the open Air, and placed with other hardy exotic Plants, such as *Myrtles*, *Geraniums*, &c. where they may be defended from strong Winds; and in hot dry Weather, they must be plentifully watered: with this Management the Plants will thrive, and in *June*, *July* and *August*, they will flower, at which time they will make a pretty Appearance amongst other exotic Plants.

As these Plants sometimes produce good Seeds in *England*, or if their Seeds are procured from abroad; so those Persons who are desirous to propagate them from Seed, should sow them the Beginning of *March*, on a very moderate Hot-bed, observing frequently to water the Bed to keep the Earth moist, otherwise the Seeds will not vegetate; and when the Plants appear above Ground, they should have a large Share of Air, otherwise they will draw up too weak: they must also be kept clear from Weeds, and frequently refreshed with Water; when the Plants are about two Inches high, they should be each transplanted carefully into a small Pot, filled with light fresh Earth, and plunged into a very moderate Hot-bed again, being careful to shade them from the Sun until they have taken Root; after which time they must be inured to bear the open Air by degrees, and in *June* they should be removed out of the Hot-bed, and placed in a sheltered Situation, and managed as hath been directed for those Plants which were raised from Cuttings.

The thirty-eighth Sort is much more tender than either of the former, being an Inhabitant of

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of the warmest Parts of *America*. This was discovered by Father *Plumier*, in the *French Settlements*; and in the Year 1731. I had the Seeds of this Plant sent me by the late Dr. *William Houstoun*, from *La Vera Cruz*. This Sort grows about two Feet and a half, or three Feet high, and divides into many succulent Branches, which are beset with thick succulent Leaves, somewhat resembling those of *Purslane*: on the Top of the Branches is sent forth a slender Stalk about a Foot long, which is garnished with beautiful scarlet Flowers, growing in a Spike; these Flowers are succeeded by tricapular Seed-vessels, which are full of small Seeds.

This Sort, which was first procured by Seeds from abroad, has been since propagated by Cuttings, and dispersed into several Parts of *Europe*. The best Season for planting of these Cuttings, is in *July*; but they should be cut from the Plant, and laid to dry, four or five Days before they are planted, otherwise they are very subject to rot. These Cuttings should be planted in Pots, filled with light fresh sandy Earth, and plunged into a moderate Hot-bed, being careful to shade them from the Sun in the Heat of the Day, as also to refresh them now and then with a little Water; but they must not be kept too moist, lest that should rot them. The Glasses of the Hot-bed should also be raised every Day, to admit fresh Air to the Plants, in proportion to the Warmth of the Season. With this Management the Cuttings will take Root in about a Month, when they may be exposed to the Sun, giving them a proportionable Quantity of Air; but they should remain in the Bed till the latter End of *September*, when they should be removed into the dry Stove, and placed in the warmest Part, where they may have Sun and Heat. During the winter Season they should be sparingly watered, but in Summer they should have a greater Share, as also a large Quantity of fresh Air; but they must constantly remain in the Stove.

HELLEBORINE, Bastard Hellebore.

To this Article must be added;

1. HELLEBORINE *latifolia*, flore albo clauso. Raii Syn. Broad-leav'd Bastard Hellebore, with a white shut Flower.
2. HELLEBORINE *foliis prælongis angustis acutis*. Raii Syn. Bastard Hellebore, with longer narrow pointed Leaves.
3. HELLEBORINE *palustris nostras*. Raii Syn. Marsh Bastard Hellebore.
4. HELLEBORINE *montana angustifolia purpurascens*. C. B. P. Narrow-leav'd purple mountain Bastard Hellebore.
5. HELLEBORINE *Virginiana, opbioglossi folio*. D. Banist. Bastard Hellebore of *Virginia*, with an adders-tongue Leaf.
6. HELLEBORINE *Mariana, bupleuri angustissimo folio, purpurascens flore, caule apophyllo*. Pluk. Bastard Hellebore of *Maryland*, with a very narrow Leaf, like that of Hares-ear, a purplish Flower, and a Stalk without a Leaf.

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7. HELLEBORINE *Mariana, flore pallide purpureo, trianthopboros*. Pluk. Mantiss. Bastard Hellebore of *Maryland*, with pale purple Flowers, growing three on a Stalk.

8. HELLEBORINE *Mariana monanthos, flore longo purpurascens liliaceo*. Pluk. Mantiss. Bastard Hellebore of *Maryland*, with one long purplish lily-shaped Flower.

9. HELLEBORINE *Virginiana, flore rotundo magno ex purpureo albicante*. Banist. Cat. Bastard Hellebore of *Virginia*, with a large round Flower of a purplish white Colour.

10. HELLEBORINE *foliis liliaceis, asphodeli radice*. Plum. Cat. Bastard Hellebore of *America*, with Leaves like the Lily, and an asphodel Root.

11. HELLEBORINE *purpurea, tuberosa radice*. Plum. Cat. Purple Bastard Hellebore, with a tuberosé Root.

12. HELLEBORINE *Americana, foliis longissimis, tuberosa radice*. American Bastard Hellebore, with very long Leaves, and a tuberosé Root, commonly called, the Flower of the Holy Ghost.

13. HELLEBORINE *graminea, foliis rigidis carinatis*. Plum. Cat. Grass-like Bastard Hellebore, with stiff Leaves.

The first, second and third Sorts, grow wild in many Parts of *England*; the fourth Sort has been found in *Ireland*, and is pretty common in other Parts of *Europe*. These may be transplanted into Gardens, from the Places of their natural Growth; either in the Spring, soon after they appear above Ground, or in Autumn, when their Leaves begin to decay; but if they are transplanted in Spring, there should be great Care had, to preserve a large Ball of Earth to their Roots, otherwise they will not succeed. These Plants should be planted in shady moist Places, and in a strong undunged Soil, where they will continue many Years, and produce their Flowers toward the latter Part of Summer.

The fifth, sixth, seventh, eighth and ninth Sorts, are Natives of *Virginia*, *Maryland*, and *New England*; from which Places some of their Roots have been brought into *England*. The best Method to obtain these Kinds, is to procure some of their Roots to be taken up with Balls of Earth, and planted into Tubs of the natural Soil in which they grew, as close together as possible; these Tubs should remain in the Country, until the Leaves of the Plants begin to decay, when they may be put on board the Ships, and sent over; for as the Roots will then be in a State of Inaction, so they will be in less Danger of suffering in their Passage, than if they were in a vigorous growing State, and will require very little (if any) Water. These Plants may be planted out of the Boxes into small Wilderness Quarters, where they will abide the Cold of the Winter very well, and produce their Flowers in Summer.

The tenth and eleventh Sorts were discovered by Father *Plumier*, in the *French Settlements* in *America*; both these Sorts were sent by the late Dr. *William Houstoun* from *Jamaica*, where

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where they grow in the Woods and shady Places in great Plenty. The eleventh Sort was also sent from the *Bahama Islands*, to Mr. Peter Collinson, and hath been since distributed to many curious Persons in *England*. This is a very curious Plant, and deserves a Place in the Stove, because it produces a most beautiful Spike of purple Flowers every Year. This and the former Sort, are propagated by Off-sets, which they send forth plentifully; the best Season for transplanting the Roots, and taking off the Off-sets, is in the Beginning of *February*, just before they begin to shoot. These Roots should be planted in Pots, filled with light rich Earth, and then plunged into the Tan in the Stove, observing to refresh the Earth with Water now and then; but it must not be given to them in great Quantities, until they have sent forth their Leaves; for too much Moisture will rot these Roots, while they are in an unactive State. These Plants should constantly be kept in the Bark-bed in the Stove, otherwise they will not flower: during the summer Season, they will require a larger Share of Moisture, and in hot Weather, they should have a large Share of fresh Air; but in Winter they must be kept warm, otherwise the Roots will perish. With this Management the Plants will thrive exceedingly, and produce their beautiful Flowers in *August*. The Roots of these Plants should not be disturbed in Winter; for altho' their Leaves decay in Autumn, and their Roots remain inactive, yet if they are taken up and kept out of the Ground, they are very apt to shrink, unless great Care be taken of them. The eleventh Sort was by Accident procured in *England*, the Root being sent over as a Specimen of the Plant, which was dried and sent to Mr. Collinson; he took off the Root, and had it planted in the Stove at Sir Charles Wager's Garden; it grew and flowered; from which Root there has been a great Number produced. This Sort produces a Spike of Flowers near two Feet long, which being of a bright purple Colour, make a fine Appearance in the Stove.

The twelfth Sort grows in great Plenty on the Sides of the Road between *Porto Bello* and *Panama*, in the *Spanish West-Indies*, in shady Places, and on a stony Soil. The *Spaniards* say, it is only to be found in this Place, and that it cannot be transplanted to any other Part of the Country, so as to grow. The Flowers of this Plant resemble a *Dove*, from whence the *Spaniards* gave it the Name of the *Holy Ghost*. Some of these Roots were sent to *England* by Mr. Robert Millar, Surgeon, who was on the Spot where they grow; some of these Roots are yet alive in *England*, but have not as yet produced any Flowers. This and the thirteenth Sort, are both very tender Plants; so, if they are brought into *England*, they must be treated very tenderly, their Roots should be planted in Pots, filled with a sandy Soil mixed with lime Rubbish; and then plunged into a Hor-bed of Tanners-bark, being careful not to give them too much Water, until they begin to shoot; after which time they should be frequently watered. During

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the summer Season these Plants must have fresh Air admitted to them; but in Winter they must have a very warm Situation. These put forth their green Leaves in *May*, which continue till Autumn, when they decay; so that the Roots remain inactive above six Months.

There are many other Sorts of these Plants, which are Natives of *America*; but the greater Part of them growing on Trees, cannot be cultivated in Gardens; so it is needless to enumerate them in this Place.

HELLEBORUS, Hellebore.

The *Species* omitted in the former Volume are;

1. *HELLEBORUS niger bortenensis alter. C. B. P.* The other garden black Hellebore.
2. *HELLEBORUS niger, amplioribus foliis. Tourn.* Black Hellebore, with larger Leaves.
3. *HELLEBORUS niger autumnalis, flore maximo. H. R. Par.* Autumnal black Hellebore, with a very large Flower.
4. *HELLEBORUS niger, sanguineo folio. Bocc. Mus.* Black Hellebore, with a bloody Leaf.

5. *HELLEBORUS niger orientalis, amplissimo folio, caule præalto, flore purpurascens. Tourn. Cor.* Eastern black Hellebore, with a very large Leaf, a tall Stalk, and a purplish Flower.

These Plants are not Natives of this Country, but are hardy enough to bear the Cold of our Winters very well in the open Air: they require a shady Situation, and thrive best in a strong loamy Soil; for if the Ground is hot and dry, in which they are planted, they will not thrive or produce any Flowers.

They may be propagated by parting of their Roots, or from Seeds, as is directed in the former Volume, for those *Species* which are enumerated there; to which the Reader is desired to turn, to avoid Repetition.

HERMANNIA.

To this Article must be added;

1. *HERMANNIA frutescens, folio oblongo molli cordato hirsuto. Boerb. Ind.* Shrubby Hermannia, with a soft oblong hairy heart-shaped Leaf.

2. *HERMANNIA frutescens, folio multifido tenui, caule rubro. Boerb. Ind. alt.* Shrubby Hermannia, with a narrow multifid Leaf, and a red Stalk.

3. *HERMANNIA frutescens, folio lavendule latiori & obtuso, flore parvo aureo. Boerb. Ind. alt.* Shrubby Hermannia, with a broad blunt lavender Leaf, and a small golden Flower.

These three Sorts of Hermannia are Natives of the *Cape of Good Hope*, from whence they have been brought into the *European* Gardens. They may be propagated by Cuttings, which should be planted in *June*, on a Bed of light Earth, being careful to shade them from the Sun until they have taken Root, as also to refresh them with Water. When the Cuttings have taken Root, they may be exposed to the open Air; but it will be proper to let them remain in the Bed until the Middle or latter End of *August*, when they

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they should be carefully taken up, and each planted in a separate small Pot, and placed in the Shade until they have taken new Root; after which time they may be exposed with other hardy exotic Plants, in a sheltered Situation, till *October*; when they must be removed into the Green-house, and placed where they may enjoy a large Share of Air in mild Weather; but must be protected from Frost, and treated as hath been directed for those Sorts enumerated in the former Volume.

HERMODACTYLUS, the *Hermodactyl*, commonly called *Snakes-head Iris*.

The Characters are;

It hath a lily-shaped Flower, consisting of one Leaf, and shaped exactly like an Iris; but has a tuberose Root, divided into two or three Dugs, like oblong Bulbs.

We have but one Species of this Plant, which is;

HERMODACTYLUS folio quadrangulo. C. B. P. *Snakes-head Iris, vulgè.* This is also called, *Iris tuberosa Belgarum; i. e.* The tuberose Iris of the *Dutch*.

This Plant is easily propagated by its Tubers, which should be taken off soon after the green Leaves decay, which is the proper Season for transplanting of the Roots; but they should not be kept long out of the Ground, lest they shrink; which will cause them to rot when they are planted. They should have a loamy Soil, not too strong, and must be planted to an *East Aspect*, where they will flower very well. These Roots should not be removed oftener than once in three Years, if you design to increase them; but then they should be planted at a farther Distance from each other than if they were to remain but one Year, and the Beds should be kept clear from Weeds, and at *Michaelmas* there should be some fine Earth laid over the Beds, which will greatly strengthen their Roots. The Distance which these Plants should be allowed is six Inches square; and they should be placed four Inches deep in the Ground. These produce their Flowers in *May*, and their Seeds are ripe in *August*; but as they multiply pretty fast by their Roots, so few People are at the Trouble to raise them from Seeds; but those who have an Inclination so to do, must treat them in the Manner directed for the *bulbous Iris's*.

This Plant has by some Botanic Writers been supposed the true *Hermodactyl*; but what has been long used in *Europe* for that, is a true *Colchicum*.

HERNANDIA, Jack in a Box, *vulgè.*

The Characters are;

It hath a short, multifid, spreading bell-shaped Flower, or a rosaceous Flower, consisting of several Petals, which are placed in a circular Order; these are some of them barren, and others are fertile: the Cup of the Flower afterward becomes an almost spherical Fruit, which is swelled and perforated, containing a striated, roundish Nut.

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We have but one Species of this Plant, which is;

HERNANDIA amplo bedera folio umbilicato. Plum. *Hernandia*, with a large umbilicated ivy Leaf, commonly called in the *West-Indies*, *Jack in a Box*.

This Plant is very common in *Jamaica*, *Barbadoes*, *St. Christophers*, and many other Places in the *West-Indies*; where it is known by the Name of *Jack in a Box*. The Fruit of this Plant, when ripe, is perforated; and the Nut in the Inside becoming hard, the Wind blowing through the Fruit makes a whistling Noise, which may be heard at a Distance; from whence, I suppose, the Inhabitants gave it this Name. It grows in the Gullies, where there are Rills of Water.

In *Europe* this Plant is preserved in curious Gardens, with other tender exotic Plants. It is propagated by sowing of the Seeds on a Hot-bed in the Spring; and when the Plants have arisen two Inches high, they should be transplanted each into a separate Pot, filled with fresh rich Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken Root; after which time they must have Air admitted to them (by raising of the Glasses) in proportion to the Warmth of the Air, or the Heat of the Bed in which they are placed; and they must be frequently watered, otherwise they will not thrive. As the Plants advance, so they should be removed into larger Pots, which should be filled with rich Earth; but in doing of this, you should be very careful not to break the Roots, as also to preserve a good Ball of Earth to them; they must also be well watered, and if their Leaves should hang after being removed, the Plants must be screened from the Sun until they have taken new Root; the best Time to shift these Plants is in *July*; that they may be well rooted before the Cold approaches; and the Plants must be constantly kept in the Bark-stove: in Winter they should have a moderate Share of Heat, and in Summer they must have a large Share of Air in hot Weather. With this Management the Plants will grow to the Height of sixteen Feet, or more; and the Leaves, being very large, will make a beautiful Appearance in the Stove. It hath not as yet flowered in *England*, though we may expect some of the large Plants to flower in a short time.

HIERACIUM. Hawkweed.

The Species omitted in the former Volume are;

1. **HIERACIUM** longius radicum. Ger. *Emac.* Long rooted Hawkweed.

2. **HIERACIUM** minus, præmorsaradice. Park. Hawkweed with bitten Roots, or yellow Devils-bit.

3. **HIERACIUM** primum latifolium. Clus. Broad-leaved Hungarian Hawkweed.

4. **HIERACIUM** fruticosum latifolium hirsutum. C. B. Bushy Hawkweed, with broad rough Leaves.

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5. *HIERACIUM fruticosum latifolium glabrum*. Park. Theat. Smoother broad-leav'd bushy Hawkweed.

6. *HIERACIUM fruticosum angustifolium majus*. C. B. Narrow-leav'd bushy Hawkweed.

7. *HIERACIUM pulmonaria dictum, angustifolium*. Raii Syn. Narrow-leav'd Hawkweed, commonly called Golden Lungwort.

8. *HIERACIUM macrocaulon hirsutum, folio rotundiore*. D. Lawson. Round-leav'd rough Hawkweed, with a tall Stalk.

9. *HIERACIUM λεπτοκαυλόν hirsutum, folio longiore*. D. Lawson. Slender-stalk'd rough Hawkweed, with a longer Leaf.

10. *HIERACIUM murorum laciniatum minus pilosum*. C. B. Golden Lungwort, with more jagged Leaves.

11. *HIERACIUM murorum folio longiore dissecto, maculis lividis asperso*. Vaill. Mem. Acad. Scien. Long cut-leav'd Golden Lungwort, with spotted Leaves.

12. *HIERACIUM castorei odore, Monspeliensium*. Raii Syn. Hawkweed of Montpellier, smelling like Castor.

13. *HIERACIUM luteum glabrum, five minus hirsutum*. J. B. Smoother yellow Hawkweed.

14. *HIERACIUM montanum, cichorei folio, nostras*. Raii Syn. Succory-leav'd mountain Hawkweed.

15. *HIERACIUM maximum, chondrilla folio, asperum*. C. B. The greatest rough succory-leav'd Hawkweed.

16. *HIERACIUM echioides, capitulis cardui Benedicti*. C. B. Hawkweed like Vipers Bugloss, with Heads like the Blessed Thistle, commonly called Ox Tongue.

17. *HIERACIUM pulmonaria dictum latifolium humilius, ramulis expansis*. Aët. Phil. N. 417. Dwarf branching Hawkweed, with broad Leaves.

18. *HIERACIUM Sabaudum altissimum, foliis latis brevibus crebrius nascentibus*. Mor. Hist. Tallest Savoy Hawkweed, with short broad Leaves.

19. *HIERACIUM fruticosum, angustissimo incano folio*. H. L. Bushy Hawkweed, with very narrow hoary Leaves.

20. *HIERACIUM Pyrenaicum rotundifolium amplexicaule*. Inst. R. H. Round-leav'd Pyrenean Hawkweed, whose Leaves embrace the Stalks.

21. *HIERACIUM murorum, foliis maculis & lituris atrorubentibus, pulchre variegatis*. Vaill. Mem. Acad. Scien. Hawkweed whose Leaves are beautifully marked with dark red Spots.

22. *HIERACIUM fruticosum latifolium, foliis dentatis, glabrum*. C. B. Broad-leav'd bushy Hawkweed, with smooth indented Leaves.

23. *HIERACIUM magnum Dalechampii, folio minus laciniato*. Greater Hawkweed of Dalechamp, with less cut Leaves.

24. *HIERACIUM magnum Dalechampii, folio majus laciniato*. Greater Hawkweed of Dalechamp, with more cut Leaves.

The seventeen Sorts first mentioned are Natives of *England*; some of them grow in shady Woods, and others upon dry Banks, and on old Walls in divers Places. The first eleven and the seventeenth Sorts, are abiding Plants; which may be propagated either by parting of their Roots, or from Seed: if they are propagated by parting of their Roots, it must be done about *Michaelmas*, that the Plants may be rooted before the Frost comes on; for if this Work be deferr'd till the Spring, the Plants will not have taken good Root before the Summer comes on, which will cause them to flower weak. These Roots should not be removed oftner than every third Year, because when the Plants have a Number of Heads, they will send forth so many Stalks for flowering; whereby they will make a more beautiful Appearance.

The five next mentioned Sorts are not Natives of this Country, but they are equally hardy with those before-mentioned, and may be propagated in the same Manner. These Plants are seldom introduced into Gardens, because they are common in *England*; but they may be planted in Wilderness-quarters, and under the Shade of Trees, where they will thrive very well, and afford an agreeable Variety where few other Plants will live; and as they require no farther Care after planting, so the Trouble will be little in procuring of the Plants; and when they are once fixed in the Ground, they will abide many Years without any farther Culture. If the Seeds of these Plants are permitted to scatter, they will produce a plentiful Supply of young Plants. Or when a Person is desirous to propagate them by Seeds, it should be sown in Autumn, soon after it is ripe; for if it is kept till the Spring, it doth not succeed so well.

The thirteenth, fourteenth, fifteenth and sixteenth Sorts are also Natives of *England*; but are not abiding Plants, for they seldom continue longer than two Years. The Seeds of these Plants may be sown on an open Bed or Border of fresh undunged Earth; and when the Plants come up, they should be cleared from Weeds, and thinned where they are too thick, which is all the Culture they require. If these Seeds are sown in Autumn, soon after they are ripe, the Plants will soon appear, and get Strength before Winter, so will flower the following Summer; but if they are not sown till the Spring, the Plants seldom flower until the Year after.

The twenty-third and twenty-fourth Sorts grow wild in the South of *France*, and in *Italy*; yet are hardy enough to endure the Cold of our ordinary Winters very well, in the open Air. The Seeds of these Plants should be sown in the Spring, on a Bed of fresh undunged Earth, where they are designed to remain (because they seldom succeed when they are transplanted). When the Plants are come up they should be cleared from Weeds, and where they are too close, they should be thinned, leaving them about eight or ten Inches asunder. Some of these Plants will flower the first Year they

they are sown, but these will not produce good Seeds; but those which live over the Winter, will flower early the following Summer, and, if the Season proves favourable, will produce good Seeds in *August*. These Plants seldom continue longer than two Years; so that Seeds should be annually sown, in order to preserve their Kinds; for as they continue in Flower the greatest Part of the Summer, they merit a Place in every good Garden.

HORDEUM, Barley.

In the former Volume of the *Gardeners Dictionary*, there are three Sorts of Barley mentioned; viz. *Common long-eared Barley*, *Square Barley* or *Big*, and *Sprat* or *Battle-door Barley*; but, beside these three, there are two other Sorts, which are cultivated in *England*; which are, the *Rath-ripe*, and *Naked Barley*; this last is sometimes called *French Barley*: This makes tolerable good Bread, very good Malt, and yields a large Increase.

All these Sorts of Barley are sown in the Spring of the Year, in a dry Time; in some very dry light Land, the Barley is sown early in *March*, but in strong clayey Soils it is not sown till *April*, and sometimes not until the beginning of *May*; but when it is sown so late, if the Season doth not prove very favourable, it is very late in Autumn before it is fit to mow, unless it be the *Rath-ripe* sort, which is often ripe in nine Weeks from the Time of sowing.

The *Square Barley* or *Big* is chiefly cultivated in the North of *England*, and in *Scotland*, and is hardier than the other Sorts; but this is seldom sown in the South of *England*, tho' it might be cultivated to good Purpose on some strong cold clayey Lands, where the other Kinds do not thrive so well.

Some People sow Barley upon Land where Wheat grew the former Year; but when this is practised, the Ground should be ploughed the Beginning of *October* in a dry Time, laying it in small Ridges, that the Frost may mellow it the better, and this will improve the Land greatly: Then in *March* the Ground is ploughed again, and laid even where it is not very wet; but in strong wet Lands the Ground should be laid round, and the Furrows made deep to receive the Wet. When this is finished, the Seed should be sown with a broad Cast at two Sowings; the first being harrowed in once, the second should be harrowed until the Seed is buried: The common Allowance of Seed is four Bushels to an Acre.

When the Barley is sown, the Ground should be rolled after the first Shower of Rain, to break the Clods, and lay the Earth smooth; which will render it better to mow, and also cause the Earth to lie closer to the Roots of the Corn, which will be of great Service to it in dry Weather.

Where Barley is sown upon new broken up Land, the usual Method is, to plough up the Land in *March*, and let it lie fallow until *June*; at which Time it is ploughed again, and

sown with *Turnips*, which are eaten by Sheep in Winter, by whose Dung the Land is greatly improved; and then in *March* following the Ground is ploughed again, and sown with Barley as before.

There are many People who sow *Clover* with their Barley, and some have sown the *Lucern* with Barley, but neither of these Methods are to be commended; for where there is a good Crop of Barley, the *Clover* or *Lucern* must be so weak as not to pay for standing; so that the better Way is to sow the Barley alone without any other Crop among it, and then the Land will be at Liberty for any other Crop, when the Barley is taken off the Ground.

When the Barley is ripe, (which may be known by the Colour of the Ears and the Straw) it must be mown down; and where there are a great Number of Weeds among it, it must lie on the Swarth till the Weeds are decayed; but if there should happen to fall Rain, the Barley must be shook and turned every Day, to prevent its sprouting or growing musty; and when it is well dried, it should be made up in Cocks; for if it is housed or mowed too green, it is very apt to burn; which will render it unfit for Malting, and worse for most Purposes, than if it sprouted in the Field. The usual Produce is from two to three Quarters of Barley on an Acre.

HORMINUM, Clary.

To this Article must be added;

1. *HORMINUM pratense, flore minimo. Schol. Bot.* Meadow Clary, with a very small Flower.
2. *HORMINUM spicatum, lavendulae flore & odore. Bocc. Rar. Pl.* Spiked Clary, with the Flower and Smell of Lavender.
3. *HORMINUM napi folio. Moris. H. Bles.* Turnep-leav'd Clary.
4. *HORMINUM Orientale, betonicae folio acutissimo, flore caeruleo. Tourn. Cor.* Eastern Clary, with a sharp-pointed betony Leaf, and a blue Flower.
5. *HORMINUM Orientale, betonicae folio acutissimo, flore albo. Tourn. Cor.* Eastern Clary, with a sharp-pointed betony Leaf, and a white Flower.
6. *HORMINUM Orientale latifolium glutinosum, flore partim albo, partim purpurascens. Tourn. Cor.* Eastern Clary, with broad glutinous Leaves, and a Flower partly white and partly purplish.
7. *HORMINUM Orientale latifolium glutinosum, flore albo. Tourn. Cor.* Eastern Clary, with broad glutinous Leaves, and a white Flower.
8. *HORMINUM Orientale, betonicae folio angustiore & inodoro. Tourn. Cor.* Eastern Clary, with a narrow betony Leaf, without Smell.
9. *HORMINUM Orientale, lamii folio. Tourn. Cor.* Eastern Clary, with a dead-nettle Leaf.
10. *HORMINUM Orientale, foliis sclareae, flore albo parvo. Tourn. Cor.* Eastern Clary, with the Leaves of *Sclarea*, and a small white Flower.

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11. *HORMINUM Orientale, foliis rugosis & verrucosis angustis, flore albo.* Tourn. Cor. Eastern Clary, with rough narrow-warted Leaves, and a white Flower.

12. *HORMINUM verbenæ laciniis, angustifolium.* Triumph. Clary with a narrow jagged. vervain Leaf.

13. *HORMINUM Orientale annuum, sativo simile, comâ carens, flore violaceo.* Tourn. Cor. Annual Eastern Clary, like the Garden Clary, wanting Tops, and a violet-coloured Flower.

These Plants were most of them discovered by Dr. Tournefort in the *Levant*, from whence he sent their Seeds to the *Royal-Garden at Paris*, where they were cultivated, and have been since distributed to many curious Botanic Gardens. These are all of them very hardy Plants, which will live in the open Air in *England*, and are all of them abiding Plants except the last, which is an Annual; so that the Seeds of this Kind must be sown every Spring, and managed as hath been directed for the *Garden-Clary*, in the former Volume of the *Gardeners Dictionary*.

The other Kinds are also propagated by Seeds, which should be sown in *March* on a Bed of fresh light Earth; and when the Plants are come up, they should be carefully weeded, and thinned where they are too close, leaving them about eight or ten Inches apart; and during the Summer Season they must be kept clear from Weeds, which is the only Culture they will require: The following *Michaëmas* they should be taken up and transplanted where they are to remain, allowing them at least two Feet of Room; because, when they have obtained Strength, they will send forth a great Number of Shoots, and spread pretty much every way. These Plants are preserved in Botanic Gardens, for the sake of Variety; but are seldom cultivated in other Places.

HOTTONIA, Water-Violet.

The Characters are;

It hath a rose-shaped Flower consisting of one Leaf, which is divided into five Parts almost to the Bottom; in the Centre of the Flower arises the Pointal, which afterward becomes a cylindrical Fruit, in which are contained several spherical Seeds.

We have but one Kind of this Plant; viz.

HOTTONIA, Boerb. Ind. alt. Water-Violet.

This Plant is very common in deep standing Waters, and Ditches, in several Parts of *England*. The Leaves of this Plant appear on the Surface of the Water the Beginning of *April*, and in *May* the Flowers appear on pretty long naked Stalks, growing in a Spike. These Flowers are of a fine rose Colour, which, together with their fine cut Leaves make a beautiful Appearance on the Water.

It may be propagated in deep standing Waters, by procuring its Seeds when they are ripe, from the Places of their natural Growth; which should be immediately dropp'd into the Water where they are designed to grow, and the Spring following they will appear; and if they are not disturbed, they will soon propagate themselves in great Plenty.

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HURA, the Sand Box-Tree.

The Characters are;

It hath a funnel-shaped Flower consisting of one Leaf, which is spread open at the Brim, and slightly cut into twelve Parts: at the Bottom of the Tube is placed the Pointal, which afterward becomes a globular compressed Fruit, which has twelve Cells, in each of which is contained one roundish flat Seed.

We know but one Sort of this Plant; viz.

1. *HURA Americana, abutili Indici folio.* *H. Amst.* American Hura, with a Leaf like the Indian Abutilon. This is sometimes called *Jamaica Walnuts*, and the *Sand Box-Tree*, and by others *Warnelia* and *Havelia*.

This Shrub is a Native of the *Spanish West-Indies*, from whence the Seeds have been brought into several Islands in the *West-Indies*, where the Inhabitants cultivate these Plants in their Gardens by way of Curiosity. It rises to the Height of fourteen or sixteen Feet, and divides towards the Top into several Branches, which are adorned with large Leaves indented on their Edges, and terminating in a Point; these Leaves, as also the younger Branches, are of a deep green Colour, and are full of a milky Juice, which issues out on their being broken or bruised. The Fruit of this Plant, if suffered to remain on till they are fully ripe, burst in the Heat of the Day with a violent Explosion, making a Noise like the firing of a Pistol, and hereby the Seeds are thrown about to a considerable Distance. These Seeds, when green, vomit and purge, and are supposed to be somewhat akin to the *Nux Vomica*.

The Seeds of this Plant were sent from *Cartagena in New Spain*, by the late Dr. *William Houstoun*; and since there have been many of the Seeds sent into *England* from *Barbadoes*, where there are many of the Plants cultivated in the Gardens of the Curious.

It is propagated by Seeds, which should be sown early in the Spring in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth frequently; and if the Night should prove cold, the Glasses of the Hot-bed must be covered with Mats, to preserve a gentle Warmth in the Bed; but when the Days are warm, the Glasses of the Hot-bed should be raised to admit fresh Air, as also to let the Steam of the Bed pass off: If these Rules are duly observed, the Plants will appear in about five Weeks after the Seeds are sown, when they should be carefully cleared from Weeds, and frequently refreshed with Water. As the Plants will advance very fast, where due Care is taken of them; so they should have a large Share of fresh Air admitted to them in warm Weather, otherwise they will draw up too weak. When the Plants are about four Inches high, they should be transplanted each into a separate small Pot filled with light rich Earth, and plunged again into the Hot-bed of Tanners-bark, being careful to shade them from the Heat of the Sun, until they have taken new Root; after which Time they must have free

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free Air admitted to them, by raising of the Glasses in proportion to the Warmth of the Season, and they should be frequently watered. When the Plants have filled these small Pots with their Roots, they must be shaken out of them, and their Roots trimmed, and then placed in larger Pots; which should be filled with the like rich Earth, and plunged again into the Hot-bed, where they should remain till *Michaelmas*, provided the Plants have Room, without touching of the Glasses; at which time they must be removed into the Bark-stove, and plunged in the warmest Part thereof: during the winter Season they must be often watered; but they must not have it in such Quantities then, as is given to them in Summer; they must also be kept very warm, otherwise they will not live in this Country. In Summer they must have a large Share of fresh Air in warm Weather, but they must not be removed into the open Air; for they are too tender to live abroad in the warmest Part of the Year in this Country.

There are many of these Plants now growing in the Stoves in *England*, some of which are eight or ten Feet high; but I have seen but one Plant of this Kind in Flower, which was in the Gardens of the Right Honourable Lord *Petre*, at *Ingatestone-Hall* in *Essex*.

As these Plants have ample Leaves, which are of a beautiful green Colour, so they afford an agreeable Variety among other tender exotic Plants in the Stove; for where they are kept warm, and duly refreshed with Water, they retain their Leaves all the Year in Ver-
dure.

The Fruit of this Plant is, by the Inhabitants of the *West-Indies*, cut open on the Side where the Footstalk grew, and the Seeds carefully taken out, and the Shells are used as a Standish, to contain Sand for Writing; which gave Rise to the Name of Sand-box. When these Fruit are brought intire into *England*, it is very difficult to preserve them; for when the Heat of the Summer comes on, they usually burst with an Explosion, and scatter their Seeds about.

HYDROPHYLLON, Water-leaf.

The Characters are;

It hath a bell-shaped Flower consisting of one Leaf, and cut into several Segments; from the Bottom-part of the Flower arises the Pointal, which afterward becomes a Fruit, opening in two Parts, inclosing Seeds of the same Shape as the Vessel.

We have but one Sort of this Plant, viz.

HYDROPHYLLON *Morini*. *Foncq. Hort.* Water-leaf of *Morinus*.

This Plant is very hardy in respect to Cold, but it should be planted in a moist rich Soil; for if it is planted in a dry warm Soil, it will not live, unless it is constantly watered in dry Weather. It may be propagated by parting of the Roots, which should be done in Autumn, that the Plants may be well rooted before Spring; for otherwise they will require a

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great deal of Water to preserve them. The Roots should not be parted too small, nor should it be done every Year, for that will weaken them too much; they will thrive very well in a shady Situation, provided it is not under the Drip of Trees. It flowers in *June*, but doth not perfect Seeds in this Country.

HYPECOON.

We have no *English* Name for this Plant.

The Characters are;

The Flower consists of four Leaves, which are placed in Form of a Cross; these are usually divided into three Parts. out of the Flower-cup rises the Pointal, which afterward becomes a plain smooth jointed Pod, full of kidney-shaped Seeds, which are inclosed in each Joint.

The Species are;

1. HYPECOON *latiore folio*. *Tourn.* Broad-leav'd Hypecoon.

2. HYPECOON *tenuiore folio*. *Tourn.* Narrow-leav'd Hypecoon.

3. HYPECOON *orientale, latiore folio, flore magno*. *Tourn. Cor.* Eastern Hypecoon, with a broader Leaf, and a large Flower.

4. HYPECOON *orientale, fumariae folio*. *Tourn. Cor.* Eastern HYPECOON, with a fumitary Leaf.

The first and second Sorts grow plentifully in the *South of France*, in *Spain* and *Italy*; but the third and fourth Sorts were discovered by Dr. *Tournefort* in the *Levant*; from whence he sent their Seeds to the *Royal Garden* at *Paris*.

These Plants are all of them annual, so their Seeds should be sown the Beginning of *March*, on a Bed of light fresh Earth, where they are to remain; for they seldom succeed, if they are transplanted. When the Plants are come up, they should be carefully cleared from Weeds; and where the Plants are too close, they must be thinned, leaving them about six or eight Inches apart; after this they will require no other Culture, but to keep them constantly clear from Weeds. In *June* these Plants will flower, and their Seeds will be ripe in *August*.

Sometimes, when the Spring proves very dry, the Seeds will not grow the first Year; but if the Ground is kept clear from Weeds, and not disturbed, the Plants will come up the following Spring. I have known the Seeds of these Plants remain in the Ground two Years, and the Plants have come up the third Spring very well; so that it may be very proper to sow some of their Seeds in Autumn, soon after they are ripe, in a warm Border, where the Plants may come up early the following Spring; and these will be stronger, and more likely to perfect Seeds, than those sown in the Spring; by which Method the Kinds may be preserved.

These Plants are seldom propagated but by those who are curious in Botany, tho' for the sake of Variety they may have a Place in large Gardens, because they require very little Trouble to cultivate them; and as they take up but little Room, so they may be inter-

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mixed with other small annual Plants in large Borders, where they will make a pretty Appearance.

The Juice of these Plants is of a yellow Colour, resembling that of *Celandine*; and is affirmed by some eminent Physicians, to have the same Effect as *Opium*.

HYPERICUM, St. Johns-wort.

The *Species* omitted in the former Volume are;

1. *HYPERICUM villosum erectum, caule rotundo. Tourn.* Upright hairy St. Johns-wort, with a round Stalk.

2. *HYPERICUM elegantissimum non ramosum, folio lato. J. B.* The most beautiful St. Johns-wort without Branches, and a broad Leaf.

3. *HYPERICUM minus erectum. C. B. P.* Small upright St. Johns-wort.

4. *HYPERICUM minus supinum, vel supinum glabrum. C. B. P.* Small smooth trailing St. Johns-wort.

5. *HYPERICUM folio brevior. C. B. P.* Short-leav'd St. Johns-wort.

6. *HYPERICUM crispum, triquetrum & cuspidato folio. Bocc. Mus.* Curled St. Johns-wort, with a three-cornered and pointed Leaf.

7. *HYPERICUM perfoliatum & perforatum. Tourn.* Perfoliate and perforated St. Johns-wort.

8. *HYPERICUM amplo perfoliato folio. Tourn.* St. Johns-wort, with a large thorough-wax Leaf.

9. *HYPERICUM Alpinum humilius, magno flore punctato. Tourn.* Dwarf St. Johns-wort of the Alps, with a large spotted Flower.

10. *HYPERICUM latifolium Lusitanicum. Tourn.* Broad-leav'd Portuguese St. Johns-wort.

11. *HYPERICUM Lusitanicum, linariae folio. Tourn.* Portuguese St. Johns-wort, with a toad-flax Leaf.

12. *HYPERICUM tomentosum Lusitanicum minimum. Tourn.* The smallest woolly Portuguese St. Johns-wort.

13. *HYPERICUM Creticum supinum, folio subrotundo, flore magno. Tourn. Cor.* Candy trailing St. Johns-wort, with a roundish Leaf, and a large Flower.

14. *HYPERICUM Creticum, amplissimo folio nitido. Tourn. Cor.* Candy St. Johns-wort, with a large shining Leaf.

15. *HYPERICUM villosum, foliis caulem ambientibus acutis, caeteris vero circinatis. Tourn. Cor.* Hairy St. Johns-wort, with pointed Leaves encompassing the Stalk, and the bottom Leaves exactly round.

16. *HYPERICUM orientale, foliis subrotundis auritis, cauli adhaerentibus. Tourn. Cor.* Eastern St. Johns-wort, with roundish-eared Leaves adhering to the Stalk.

17. *HYPERICUM orientale, ptarmicae foliis. Tourn. Cor.* Eastern St. Johns-wort, with sneezwort Leaves.

18. *HYPERICUM orientale, fetido simile, sed inodorum. Tourn. Cor.* Eastern St. Johns-wort, like the stinking Kind, but without Smell.

19. *HYPERICUM orientale saxatile, majoranae folio. Tourn. Cor.* Eastern rock St. Johns-wort, with a marjoram Leaf.

20. *HYPERICUM orientale, androsæmo bifuto simile, sed glabrum. Tourn. Cor.* Eastern St. Johns-wort, resembling hairy Tutfan, but smooth.

21. *HYPERICUM orientale, polygoni folio. Tourn. Cor.* Eastern St. Johns-wort, with a knot-grass Leaf.

22. *HYPERICUM orientale, caule aspero purpureo. Tourn. Cor.* Eastern St. Johns-wort, with a rough purple Stalk.

23. *HYPERICUM orientale, caule aspero purpureo, linariae folio. Tourn. Cor.* Eastern St. Johns-wort, with a rough purple Stalk, and a toad-flax Leaf.

24. *HYPERICUM orientale, rosmarini folio glauco. Tourn. Cor.* Eastern St. Johns-wort, with a sea-green rosemary Leaf.

25. *HYPERICUM orientale latifolium subbirsutum, caule purpureo villoso. Tourn. Cor.* Broad-leav'd Eastern St. Johns-wort, somewhat hairy, with a purple hairy Stalk.

The four Sorts first-mentioned are Natives of *England*, growing in Woods and other shady Places in divers Parts. The fifth, sixth, seventh and eighth Sorts, grow in the *South of France, Italy, and Spain*; yet are hardy enough to endure the Cold of our ordinary Winters very well in the open Air. The ninth Sort grows on the *Alps*; the tenth, eleventh, and twelfth Sorts are Natives of *Portugal*; but all the following Sorts were discovered by *Dr. Tournefort* in the *Levant*.

All these Plants may be propagated by sowing of their Seeds soon after they are ripe, on a Bed of fresh undunged Earth; and when the Plants are come up, they should be kept clear from Weeds; the following Spring they may be transplanted to the Places where they are to remain; after the Plants have taken new Root, they will require no farther Care, but to keep them clear from large Weeds, which, if suffered to grow amongst them, will over-bear and destroy them.

Most of the Kinds being Natives of Woods and shady Places, will grow very well under the Drip of Trees; so that they may be planted in large Wilderness Quarters, where they will thrive and make a pretty Variety. But it will be proper to keep a few Plants of each Kind in a shady Border, where, if they are permitted to shed their Seeds, they will produce a Supply of young Plants, whereby the Kinds may be preserved: for as some of the Kinds do not continue above two or three Years, so, where there is not Care taken to have a constant Supply of young Plants, their Kinds will be lost; for where the Shade of the Wilderness is very thick, the Seeds which fall there will not succeed; because the Leaves of the Trees falling in Autumn, when the Seeds are ripe, cover the Ground; whereby the Seeds either do not reach the Earth, or if they do, they are so closely covered by the falling Leaves, that they cannot enjoy the Benefits of the Air; so that they rarely grow.

HYPO-

HY

HYPOCISTIS.

We have no *English* Name for this Plant.

The Characters are;

It hath a bell-shaped Flower consisting of one Leaf, which is cut into several Segments at the Brim: the hinder Part of the Flower becomes a soft Fruit, divided into Rays, in which are contained the Seeds.

The Species are;

1. *HYPOCISTIS Cretica, flore purpureo. Tourn.* Cor. Candy Hypocistis, with a purple Flower.

2. *HYPOCISTIS purpurea, flore candicante. Tourn.* Cor. Purple Hypocistis, with a white Flower.

3. *HYPOCISTIS flore luteo. Tourn.* Cor. Hypocistis, with a yellow Flower.

4. *HYPOCISTIS pallescentis coloris, lineis purpurascens & nonnihil virescentibus distincta. Clus. Hist.* Pale-coloured Hypocistis, with purplish Lines.

These Plants grow from the Root of the Cistus, or Rock-rose, so cannot be cultivated by Art; it being a Super-plant, like the Mistleto; and it is not known to grow on any other Plant but the Cistus. But as one of the Species is used in Medicine, I thought it proper to mention the several Kinds which have been discovered.

HYSSOPUS, Hyssop.

The Species omitted in the former Volume are;

1. *HYSSOPUS utrinque florida. Dod. pempt.* Hyssop bearing Flowers on every Side.

2. *HYSSOPUS vulgaris, moschum redolens. C. B. P.* Common Hyssop, smelling like Musk.

3. *HYSSOPUS crispa. Gesner. Hort.* Curled Hyssop.

4. *HYSSOPUS foliis dissectis. C. B. P.* Hyssop with cut Leaves.

5. *HYSSOPUS spica brevi & rotunda. C. B. P.* Hyssop with a short and round Spike.

6. *HYSSOPUS versicolor sive aureus. Park.* Gold-striped Hyssop.

7. *HYSSOPUS hirsuta. C. B. P.* Hairy Hyssop.

8. *HYSSOPUS hirsuta, flore albo. Tourn.* Hairy Hyssop, with a white Flower.

All these Sorts of Hyssop are very hardy Plants, which will endure the Cold of our Winters in the open Air, provided they are planted in a dry undunged Soil; for when they are planted in a rich Soil, they grow very luxuriant in Summer, and are less able to resist the Cold in Winter: so that when any of these Plants grow out of the Joints of old Walls, (as they frequently do) they will resist the most severe Frost; and these Plants will be much more aromatic, than those which grow in a rich Soil.

They may be propagated by sowing of their Seeds in the Spring, in the Manner which is directed for the common Sort, in the former Volume of the *Gardeners Dictionary*; with which Management all these Sorts will agree, except the striped Kind, which is no way propagated but by Slips, which should be planted the Beginning of March, on a Border of fresh

JA

undunged Earth, observing in dry Weather to water them until they have taken Root; after which time they must be kept clear from Weeds, and at Michaelmas the Plants should be transplanted where they are to remain, which should be on a dry, stony or gravelly Spot of Ground, where they will preserve the Beauty of their variegated Leaves much better than in a good Soil.

JA

JACEA, Knapweed.

To this Article must be added;

1. *JACEA nigra pratensis latifolia, flore albo. Tourn.* Broad-leav'd meadow Knapweed, with a white Flower.

2. *JACEA nigra pratensis angustifolia.* Narrow-leav'd meadow Knapweed.

3. *JACEA cum squamis cili inftar pilosis. J. B.* Knapweed with hairy Scales.

4. *JACEA nigra, squamoso capite, major. C. B. P.* Greater black Knapweed, with a scaly Head.

5. *JACEA nigra, squamoso capite, minor. C. B. P.* Smaller black Knapweed, with a scaly Head.

6. *JACEA vulgaris laciniata, flore purpureo. Tourn.* Great Knapweed, or Matfellow.

7. *JACEA vulgaris laciniata, flore albo. Tourn.* Great Knapweed, or Matfellow with a white Flower.

8. *JACEA latissimo laciniato folio. C. B. P.* Knapweed with a broad jagged Leaf.

9. *JACEA cinerea laciniata, flore purpureo. Triumf.* Jagged ash-coloured Knapweed, with a purple Flower.

10. *JACEA foliis cichoraceis villosis, altissima, flore purpureo. Tourn.* The tallest Knapweed, with hairy succory Leaves, and a purple Flower.

11. *JACEA foliis cichoraceis villosis, altissima, flore albo. Tourn.* The tallest Knapweed, with hairy succory Leaves, and a white Flower.

12. *JACEA foliis erucæ lanuginosis. Tourn.* Knapweed with woolly Rocket-leaves.

13. *JACEA foliis candicantibus laciniatis, calyculis non splendentibus. Tourn.* Knapweed with whitish jagged Leaves, and Empalement not shining.

14. *JACEA foliis laciniatis viridibus, calyculis argenteis. Tourn.* Knapweed with green jagged Leaves, and silver Empalements.

15. *JACEA calyculis argenteis, minor. Tourn.* Lesser Knapweed, with silver Empalements.

16. *JACEA Alpina, succisæ folio. Tourn.* Mountain Knapweed, with a devils-bit Leaf.

17. *JACEA folio cerinthæ, è Rupe Victorie. Tourn.* Knapweed with a honey-wort Leaf.

18. *JACEA Hispanica latifolia, nervis foliorum lanuginosis. Bocc. Mus.* Broad-leav'd Spanish Knapweed, with the Nerves of the Leaves woolly.

19. JACEA

19. *JACEA Cretica aculeata incana*. Tourn. Hoary prickly Knapweed of Crete.

20. *JACEA tomentosa, foliis undulatis*. Tourn. Woolly Knapweed, with waved Leaves.

21. *JACEA Cretica saxatilis, glasti folio*. Tourn. Cor. Rock Knapweed of Candy, with a woad Leaf.

22. *JACEA Cretica laciniata argentea, parvo flore flavesciente*. Tourn. Cor. Silver jagged Candy Knapweed, with a small yellowish Flower.

23. *JACEA Cretica acaulos, cichorii folio*. Tourn. Cor. Candy Knapweed, without a Stalk, and a succory Leaf.

24. *JACEA orientalis acaulos, cichorii folio, flore citrino*. Tourn. Cor. Eastern Knapweed, without a Stalk, and a citron-coloured Flower.

25. *JACEA orientalis patula, carthami facie, flore luteo magno*. Tourn. Cor. Spreading Eastern Knapweed, with the Face of Bastard Saffron, and a large yellow Flower.

26. *JACEA orientalis, conyzæ folio, flore magno*. Tourn. Cor. Eastern Knapweed, with a fleabane Leaf, and a large Flower.

27. *JACEA orientalis, cyani folio, flore parvo, calyce argenteo*. Tourn. Cor. Eastern Knapweed, with a blue-bottle Leaf, and a small Flower with a silver Empalement.

28. *JACEA orientalis, folio sinuato subtus tomentoso, flore purpureo*. Tourn. Cor. Eastern Knapweed, with a sinuated Leaf, hoary underneath, and a purple Flower.

29. *JACEA orientalis maritima incana, coronopi folio*. Tourn. Cor. Eastern maritime hoary Knapweed, with a bucks-horn Leaf.

30. *JACEA orientalis perennis, lato coronopi folio, flore purpurasciente*. Tourn. Cor. Perennial Eastern Knapweed, with a broad bucks-horn Leaf, and a purplish Flower.

31. *JACEA orientalis perennis, angustissimo & incano coronopi folio, flore purpurasciente*. Tourn. Cor. Perennial Eastern Knapweed, with a very narrow and hoary bucks-horn Leaf, and a purplish Flower.

32. *JACEA orientalis laciniata incana & moschata*. Tourn. Cor. Hoary musk jagged-leav'd Eastern Knapweed.

33. *JACEA lutea spinosa centaurioides*. C.B.P. Prickly yellow Knapweed, like the greater Centaury.

34. *JACEA latifolia purpurea, capitulo spinoso*. C.B.P. Broad-leav'd purple Knapweed, with a prickly Head.

35. *JACEA spinosa Cretica, an species hyosiridis Plinii*. Zan. Prickly Knapweed of Candy, supposed to be a Species of Hyosiris of Pliny.

36. *JACEA marina Batica*. Park. Theat. Sea Spanish Knapweed.

37. *JACEA cyanoides altera, caule alato*. Par. Bat. Another Knapweed like Blue-bottle, with a winged Stalk.

38. *JACEA Melitensis, capitulis conglobatis*. Bocc. Rar. Plant. Knapweed of Malta, with conglobated Heads.

39. *JACEA orientalis annua, coronopi folio, flore luteo*. Tourn. Cor. Annual Eastern Knapweed, with a bucks-horn Leaf, and a yellow Flower.

40. *JACEA arborescens, styracis folio*. Tourn. Tree-knapweed, with a storax-tree Leaf.

41. *JACEA Cretica frutescens, elicbrysi folio, flore magno purpurasciente*. Tourn. Cor. Shrubby Knapweed of Candy, with a goldylock Leaf, and a large purplish Flower.

42. *JACEA frutescens, plantaginis folio, flore albo*. Tourn. Cor. Shrubby Knapweed, with a plantain Leaf, and a white Flower.

The first Sort here mentioned, is a Variety of the common Kind, which differs in the Colour of the Flower; this is sometimes found wild by the Sides of Hedges and Ditches, in low Pasture Ground.

The second Sort is very common by the Path-sides in several Parts of England, so is rarely cultivated in Gardens.

The sixth and seventh Sorts also grow wild in uncultivated Places in divers Parts of England, yet are worthy of a Place in large Gardens; for as they are lasting Plants, which require very little Care to cultivate them, and their Flowers being large and of long Continuance, so they will afford an agreeable Prospect, in some shady abject Parts of the Garden, or under the Drip of Trees, where few better Plants will thrive.

The third, fourth, and fifth Sorts, have been found wild in England, but these are less common than either of the former; but in Holland and Flanders they are very common. These may also be allowed a Place in large Gardens for the sake of Variety, because they will thrive on the poorest Soil, and require no Trouble to cultivate them.

The 8th, 9th, 10th, 11th, 12th, 13th, 14th, 15th, 16th, 17th, 18th, 19th, and 20th Sorts, are Natives of France, Spain, Italy and Germany; from which Countries they have been procured, and are preserved in some curious botanic Gardens. These, tho' some of them are Natives of warmer Countries, yet will live in the open Air in England, provided they are planted in a warm, dry, undunged Soil.

The 33d, 34th, 35th, and 36th Sorts, are also Natives of Spain and Italy; the 33d Sort grows erect to the Height of three Feet, and on the Top of the Stalks are produced large yellow Flowers, which appear the Beginning of June, and continue in Beauty most part of July; so that it deserves a Place in large Gardens, for the sake of Variety. The 34th, 35th, and 36th Sorts, have large Heads and Flowers; which being heavy, and their Stalks but weak, they generally trail on the Ground, unless they are supported by Stakes. These also produce a great Number of Branches, so that they require a large Share of Room, which renders them less valuable.

The 21st, 22d, 23d, 24th, 25th, 26th, 27th, 28th, 29th, 30th, 31st, and 32d Sorts, were discovered by Dr. Tournefort in the Levant, from whence he sent their Seeds to the Royal Garden at Paris. These Plants are somewhat more tender than the Sorts before mentioned; yet they will abide the Cold of our ordinary Winters very well in the open Air, provided

provided they have a dry Soil, and a warm Situation.

All these Sorts may be propagated by Seeds, which should be sown in *March*, on a Bed of fresh undunged Earth; when the Plants begin to appear, they must be carefully cleared from Weeds; and as soon as they are fit to transplant, they should be removed and planted in Beds of undunged Earth, at about a Foot Distance every Way. These Plants must be watered, and if the Season is hot, they should be shaded until they have taken new Root; after which time they will require no farther Care but to keep 'em clear from Weeds until *Michaelmas* following, when they should be taken up and transplanted where they are designed to remain; the common hardy Sorts under Trees, in wilderness Quarters, and other abject Parts of the Garden, where they will abide many Years, and only require to be kept clear from the largest Weeds, which will overbear them; but as for lesser Weeds, they will not hurt them: the other Sorts, which are more tender, should be planted in a warmer Situation, and on a lean stony Soil, where they will endure the Cold of our ordinary Winters very well, and afford an agreeable Variety.

The thirty-seventh, thirty-eighth and thirty-ninth Sorts, are annual Plants. The Seeds of these must be sown either in *March*, or the Beginning of *September*. Those which are sown in Autumn will come up, and the Plants will be strong enough to resist the Frost, provided they are in a warm Border; and these Plants will flower much stronger, and come earlier in the Season, than those sown in the Spring; so that these will always produce good Seeds. But if these autumnal Plants should be destroyed by severe Frost, then some of their Seeds should be sown in *March*, on a Bed of light fresh Earth, where they are designed to remain: for these Plants will not be large enough to transplant till *May*, when the Season is generally warm; so that it will be difficult to make the Plants take Root, unless they are constantly shaded and watered: so it is the better Method to sow these Seeds in the Spring on the Borders where they are to remain, and then all the Care required will be to clear them from Weeds, and thin the Plants where they come up too close: but those Plants which come up in Autumn, may be transplanted out the Beginning of *March*; at which Time they will soon take Root, and then will require no farther Culture but to keep them clear from Weeds. These Plants continue a long Time in Flower, especially the thirty-seventh Sort; which renders them worthy of a Place in every large Garden.

The fortieth, forty-first and forty-second Sorts are shrubby Plants, which rise to the Height of four or five Feet, and their Stems become woody. These are Natives of the *Archipelago*, from whence their Seeds have been sent to several curious Botanic Gardens; but at present they are very rare in *England*. They may be propagated by sowing of their Seeds in *March*, on a warm Border of fresh

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Earth; and when the Plants are come up, they must be carefully weeded, and in very dry Weather they should be frequently refreshed with Water. When the Plants have acquired Strength enough, they should be carefully taken up, and each transplanted into a separate small Pot filled with fresh light Earth, and then placed in the Shade until they have taken new Root; when they may be removed into an open Situation, where they may remain till *October* following; during which Time they must be watered in dry Weather, and kept clear from Weeds; but in Winter they should be sheltered under a Hot-bed Frame, where they should have as much free Air as possible in mild Weather, by taking off the Glasses every Day; but in hard Frosts they must be closely covered with Mats or Straw over the Glasses, to secure them from the Cold. The following Spring a few Plants of each Kind may be shaken out of the Pots, and planted in warm dry Borders, where they will live thro' the Winter, provided the Frost is not very severe, and these Plants will flower much stronger than those in Pots; but it will be proper to keep two Plants of each Kind in Pots to be sheltered in Winter, for fear those Abroad should be destroyed, that the Kinds may be preserved.

These Plants seldom produce good Seeds in this Country, so that when the Plants are obtained, they may be propagated by Cuttings, which should be planted about the Middle of *June* on a shady Border, where, if they are duly watered, they will take Root in about two Months; but it will be proper to let them remain in the same Border until the Beginning of *September*, when they should be carefully taken up and planted into Pots, and placed in the Shade until they are rooted: then they may be exposed in an open Situation till the middle or latter End of *October*, when they should be removed into Shelter, and managed as hath been directed for those Plants which are raised from Seeds. In Summer these Plants will flower, when they will afford an agreeable Prospect, if they are placed among other hardy exotic Plants; and as they are evergreen, so they add to the Variety in Winter.

JACOBÆA, Ragwort.

To this Article must be added;

1. JACOBÆA vulgaris laciniata. C. B. P. Common Ragwort.
2. JACOBÆA latifolia palustris, five aquatica. Rait Hist. Broad-leav'd Marsh Ragwort.
3. JACOBÆA Alpina, foliis subrotundis serratis. C. B. P. Roundish sawed-leav'd Ragwort of the Alpes.
4. JACOBÆA Alpina, foliis longioribus serratis. Tourn. Ragwort of the Alpes, with long saw'd Leaves.
5. JACOBÆA montana, betonica folio. Barr. Icon. Mountain Ragwort, with a betony Leaf.
6. JACOBÆA chrysanthemi Cretici folio glauco. Tourn. Ragwort with a sea-green chrysanthemum Leaf.

7. *JACOBÆA senecionis folio incano, perennis.* Raii Hist. Perennial hoary Ragwort, with a groundsel Leaf.

8. *JACOBÆA Pannonica prima.* Clas. Hist. Mountain Ragwort, with an undivided Leaf.

9. *JACOBÆA foliis amplioribus incanis.* Mor. H. R. Blas. Ragwort with large hoary Leaves.

10. *JACOBÆA maritima, five Cineraria latifolia.* C. B. P. Broad-leaved Sea Ragwort.

11. *JACOBÆA foliis ferulaceis, flore minore.* Tourn. Ragwort with fennel-giant Leaves, and a smaller Flower.

12. *JACOBÆA foliis ferulaceis, flore majore.* Tourn. Ragwort with fennel-giant Leaves, and a larger Flower.

13. *JACOBÆA Africana, botryos folio.* Boerb. Ind. alt. African Ragwort, with an Oak of Jerusalem Leaf.

14. *JACOBÆA Chia, senecionis folio villosa, flore magno.* Tourn. Cor. Ragwort of Chia, with a hoary groundsel Leaf, and a large Flower.

15. *JACOBÆA Orientalis, senecionis folio tenuissime diviso, non incano, flore magno.* Tourn. Cor. Eastern Ragwort, with a very narrow divided groundsel Leaf, not hoary, and a large Flower.

16. *JACOBÆA Græca maritima, foliis superne virentibus, inferne incanis.* Tourn. Cor. Greek Sea Ragwort, with Leaves green on their upper Side, but hoary underneath.

17. *JACOBÆA Africana frutescens, abrotani folio.* Oldenl. Shrubby African Ragwort, with a southernwood Leaf.

18. *JACOBÆA Africana absinthii foliis.* Oldenl. African Ragwort, with wormwood Leaves.

19. *JACOBÆA Americana odorata & viscosa, florum radiis brevissimis albis.* Houst. Sweet-smelling viscous American Ragwort, with very short white Rays to the Flower.

The first Sort of this Ragwort here mentioned, is one of the most troublesome Weeds, on poor wet Pasture Lands, and on Commons in almost every Part of England; so is never admitted into Gardens, because where the Seeds are permitted to scatter, the Down which adheres to them, will carry them to a great Distance; so that all the Ground will be filled with the Weeds. The only Method to destroy this Plant in Pastures is, to go over the Land in April, when the Weather is dry, and with a Spaddle cut up the Plants by their Roots; and, if the Weather continues dry, they will soon dry up. This Work should also be repeated in August, to cut up such Plants as may have come up since April; and if this be repeated two or three Years, never suffering any of the Plants to stand to flower, it will effectually destroy them.

The second Sort is also a very common Weed on low marshy Lands, where the Water usually stands in Winter. This is also a very troublesome Weed on many Commons, and other Pastures; but may be destroyed in the same manner as the former.

The third, fourth, and fifth Sorts are Natives of the Alpes and Pyrenean Mountains, from whence they have been procured, and are preserved in several curious Botanic Gardens, for the Sake of Variety. They may be propagated by Seeds, which should be sown in the Spring, on a Bed of fresh Earth; and when the Plants are come up, they should be carefully weeded; and when they are strong enough to be removed, they should be transplanted into a strong loamy Soil, where they will continue many Years, and require no other Culture but to clear them from Weeds.

The sixth, eighth, thirteenth, fourteenth, and fifteenth Sorts are annual Plants, which should be sown in the Spring, on a Bed of light fresh Earth, where they are designed to remain; and when the Plants come up, they should be thinned where they are too close, and kept clear from Weeds; which is all the Culture they require. In June they will flower, and their Seeds will ripen soon after; which, if permitted to scatter, will furnish a Supply of young Plants where-ever the Seeds do fall.

The seventh and eighth Sorts grow wild in England; the seventh is a lasting Plant which grows under Hedges, and in Woods in divers Parts of England; but the eighth Sort is an annual Plant, which is usually found on dry Hills, in some Counties near London.

The tenth Sort differs from the common Sea Ragwort in being much broader-leav'd, and not so hoary: This is a lasting Plant, which will endure the Frost in the open Air very well, and may be treated as is directed for the common Sea-Ragwort in the former Volume of the Gardeners Dictionary.

The eleventh and twelfth Sorts are also abiding, which may have a Place in large Gardens for the Sake of Variety. These Plants have fine cut Leaves, and the Stems grow erect about two Feet high, on the Tops of which the Flowers grow in an Umbel, which are of a fine yellow Colour.

These may be propagated by Seeds, which should be sown the Beginning of March, on a Bed of light fresh Earth; and when the Plants come up, they should be carefully cleared from Weeds; and draw out some of the Plants where they are very close together, that those remaining may grow stronger: when the Plants are strong enough to remove, they should be transplanted in a Bed of fresh Earth about six Inches apart, where they may remain till Michaelmas, being careful to keep them clear from Weeds; then the Plants may be taken up, and transplanted into large Borders amongst other hardy Plants; where they will flower the following Summer, and make an agreeable Variety.

JASMINOIDES, Bastard Jasmine.

The Characters are;

It hath a tubulous bell-shap'd Flower consisting of one Leaf, which is cut into five short Segments; from the Flower-cup (which is also divided into five Parts) arises the Pointal, fixed

fixed like a Nail in the inner-part of the Flower, which afterwards becomes a round soft Fruit or Berry, in which are twelve or fourteen Seeds.

The Species are;

1. *JASMINOIDES Africanum, jasmini aculeati foliis & facie. Ac. Reg. Scien.* Bastard Jasmine with Leaves and the Face of prickly Jasmine.

2. *JASMINOIDES laureolæ folio, flore candido, interdiu odorato. Hort. Elth.* Bastard Jasmine with a large laurel Leaf, and a white Flower, which smells sweet in the Day.

3. *JASMINOIDES folio pishaminis, flore vire-scente, noctu odoratissimo. Hort. Elth.* Bastard Jasmine with a pishamin Leaf, and a greenish Flower, which is very sweet in the Night.

4. *JASMINOIDES arborescens, nicotianæ folio, flore albo. Houst.* Tree-like Bastard Jasmine, with a tobacco Leaf, and a white Flower.

5. *JASMINOIDES aculeatum, salicis folio, flore parvo ex albo purpurascens. Michel. Nov. Gen.* Prickly Bastard Jasmine, with a willow Leaf, and a small Flower of a purplish white Colour.

6. *JASMINOIDES aculeatum humile, balimi minoris folio, flore majori violaceo, fructu cras-siore, per maturitatem flavescens. Michel. Nov. Gen.* Dwarf prickly bastard Jasmine, with a lesser halimus Leaf, a larger violet-coloured Flower, and a thicker Fruit, which turns yellowish when ripe.

The first and fifth Sorts have been old Inhabitants in the *English* Gardens, and have been generally known by the Name of *Rham-nus* or *Buckthorn*. They are pretty hardy Shrubs, which in very mild Winters will live Abroad in the open Air; but in hard Frost they are destroyed where they are not protected: so that they are generally kept in Pots or Tubs, and removed into the Green-house in Winter.

The sixth Sort is more rare in *England* than either of the former, but is very common in *Italy*. This is as hardy as the two former, and may be treated in the same manner.

These Plants may be propagated by Cuttings, which should be planted the Beginning of *May* on a Border of light fresh Earth, observing to water and shade them until they have taken Root, and constantly keep 'em clear from Weeds. When these Cuttings are strongly rooted, (which may be known by their sending forth strong Shoots) they should be carefully taken up with Balls of Earth to their Roots, and planted each into a separate Pot filled with fresh light Earth; and then placed in a shady Situation; until they have taken new Root; after which Time they should be removed into a sheltered Situation, where they may remain with other pretty hardy exotic Plants, until the Beginning of *November*; when they should be removed into Shelter, with *Bays*, *Oleanders*, and other such hardy Plants, as only require to be sheltered from extreme Frost; but should have as much free Air as possible in mild Weather.

In Summer these Plants must be plentifully watered in dry Weather, for they are

very thirsty; there should also be Care taken that they do not root thro' the Pots into the Ground, which they are very apt to do, if they are permitted to stand long in a Place unremoved; so that, when their Roots are torn off by taking of them up, the Leaves are apt to fall, and their young Shoots will wither. In Winter these Plants must be frequently watered while they are in the Green-house; but the Water must not be given to them in so large Quantities at that Season as in Summer.

These Plants may also be propagated by laying down their tender Branches in the Spring of the Year, which, if duly watered, will take Root by Autumn, when they should be taken off from the old Plants, and planted in Pots, as was directed for the Cuttings. As these Plants shoot very freely, so they should be pruned, to reduce them and keep them in Compass; otherwise they will grow very rude and unsightly, and their Heads will soon grow too large for their Stems; they should also be shifted out of the Pots at least once a Year, when their Roots should be well trimmed; and as their Roots increase in Bulk, so they must be put into larger Pots.

The first Sort will flower very freely most part of Summer, and where the Plants are duly water'd, they will often produce ripe Fruit, and flower again in Winter.

But the fifth and sixth Sorts do not flower so kindly in *England*, tho' they shoot most luxuriantly, when their Roots are not too much confined.

The second, third and fourth Sorts are much tenderer Plants than the former, these being Natives of the warmest Parts of *America*: the Seeds of the second Sort I received from the *Spanish West-Indies*, by the Name of *Dama de Dia*; and the third, by the Name of *Dama de Noche*; the Flowers of one Sort being very sweet in the Day, and those of the other being sweet in the Night.

The fourth Sort was discovered by Father *Plumier* in the *French Settlements in America*, who calls it in his Catalogue, *Jasminum arbore-scens, nicotianæ folio, flore albo*. But I received the Seeds of this Sort from *la Vera Cruz*, which were sent me by the late Dr. *William Houstoun*, who had carefully examined the Flowers and Fruit of this Plant, and accordingly ranged it amongst the *Bastard Jasmines*.

These three Sorts may be propagated either by Seeds or Layers; but as they do not produce Seeds in this Country, so their Seeds must be procured from the Places of their natural Growth. If they are propagated by Seeds, they should be sown in the Spring in Pots filled with light fresh Earth, covering them about a quarter of an Inch with Mould; then plunge the Pots into a Hot-bed of *Tanners-bark*, observing to water the Earth as often as it appears dry; for if the Earth is not kept moist and warm, the Seeds will not vegetate; therefore, if the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats, to preserve a moderate Heat

Heat in the Bed; but in the Day-time, when the Sun shines warm, the Glasses should be raised to let the Steam of the Bed pass off, as also to admit fresh Air. When the Plants begin to appear, they must be duly watered, and carefully cleared from Weeds, observing to admit fresh Air to them in hot Weather, as also to cover the Glasses every Night, when it is cold, to keep them warm. When the Plants are about three Inches high, they should be shaken out of the Pots carefully, and each transplanted into a separate small Pot filled with light fresh Earth, and then plunged into the Hot-bed again, observing to shade the Plants from the Heat of the Sun until they have taken new Root; after which Time the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants in proportion to the Warmth of the Season; and they must be constantly watered in hot Weather, for they are thirsty Plants. When the Plants are grown so tall as to reach near the Glasses, they should be removed out of the Hot-bed, and plunged into the Bark-bed in the Stove, where they must remain all the Winter; during which Season they must be kept very warm, and must be frequently refreshed with Water. With this Management they will thrive very fast, and the following Summer will produce their Flowers; but they should be constantly kept in the Stove, giving them a larger Share of fresh Air in Summer, as also Plenty of Water; for if they are placed Abroad in Summer, they will not produce their Flowers, nor will their Leaves continue in Beauty; for as the Weather often alters in this Climate, so, whenever it is cold or stormy Weather, these Plants, when exposed thereto, are so much pinched as not to recover their Verdure till after they have been removed into the Stove for some Time; and often, when they are much pinched by cold Nights or Winds in Summer, they do not recover till the following Spring.

If you propagate these Plants by Layers, some of their tender Branches should be laid down in April; and if the Pots are at that time placed in a warm Bed of Tanners-bark, it will greatly promote their Rooting, especially if they are duly watered. These Layers will be sufficiently rooted for Transplantation in about three Months after Laying; when they should be raised up, and cut off from the old Plants, and each planted into a Pot filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; after which Time they may be treated as has been directed for the seedling Plants.

The second Sort may also be propagated by Cuttings, which should be planted in May, in Pots filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Heat of the Sun until they have taken Root, as also to give them Plenty of Water. When the Cuttings are well rooted, they should be each

planted into a separate Pot, and managed as the Layers.

JASMINUM, Jasmine.

To this Article must be added;

1. *JASMINUM Malabaricum, foliis mali arantii, flore niveo odoratissimo. Com.* Jasmine of Malabar, with orange Leaves, and a snow-white very sweet scented Flower.

2. *JASMINUM Americanum, foliis conjugatis, floribus spicatis albis. Houst.* American Jasmine, with Leaves growing opposite, and white Flowers growing in Spikes.

3. *JASMINUM arborescens, foliis laurinis, flore umbellato. Houst.* Tree-like Jasmine, with bay Leaves, and Flowers growing in an Umbel.

The first of these Jasmynes was formerly brought from Malabar in the East-Indies into Italy, where it is now pretty common in the curious Gardens; but in England it is still very rare. The second and third Sorts were discovered by the late Dr. Houstoun at la Vera Cruz in America, from whence he sent Specimens and Seeds of both Kinds to England.

These Plants may be propagated by Seeds or Layers; but as they do not produce Seeds in Europe, and they are rarely brought from the Countries of their natural Growth, so the only Method of propagating them, is by Layers: these Layers should be laid down early in the Spring, at which Time the Pots should be plunged into a moderate Hot-bed of Tanners-bark, observing to water them duly in hot Weather, as also to let them have a good Share of fresh Air. With this Management the Layers will be rooted in three or four Months, fit to transplant; when they should be carefully taken up, and cut off from the old Plants, and each planted into a separate small Pot filled with light rich Earth, and then plunged into the Hot-bed again, observing to water and shade them until they have taken new Root; after which Time they may be removed into the Stove, where they should be kept warm during the winter Season; and they should be frequently refreshed with Water. In Summer these Plants should have a large Share of fresh Air admitted to them in warm Weather, by opening of the Glasses of the Stove; but they should never be set Abroad in the open Air, for they are too tender to thrive Abroad in this Climate, even in the hottest Season of the Year. These Plants also require a large Share of Moisture in hot Weather, and their Leaves should be frequently refreshed with Water, and washed with a Sponge, to clear 'em from the Filth, which they are very subject to contract by remaining constantly in the House.

With this Management these Plants will thrive and produce Plenty of Flowers every Year in July and August; and their Leaves remaining green thro' the Year, they make an agreeable Variety in the Stove, amongst other tender exotic Plants.

The Spanish or Catalonian Jasmine, as it is vulgarly called, is a Native of America, from whence

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whence I suppose it was brought to *Spain*; soon after the *Spaniards* had possessed themselves of the South Continent of *America*, because this Plant is not known to grow wild in any Part of *Europe*; but in many Places in the *Spanish West-Indies*, the Woods are full of it, as I have been informed by Mr. *Robert Millar*, Surgeon, who sent over many Specimens of this Plant from thence.

ICACO, *American Plum*, *vulgo*.

The Characters are;

It hath a rose-shaped Flower, consisting of several Petals, which are placed in a circular Order; from whose Flower-cup arises the Pointal, which afterward becomes an oval soft fleshy Fruit, inclosing a rough Stone of the same Form, in which is contained a round Kernel.

The Species are;

1. ICACO fructu ex albo rubescente. Plum. Nov. Gen. The Maiden Plum-tree.
2. ICACO fructu nigro. Plum. Nov. Gen. American Plum-tree.
3. ICACO fructu purpureo. Plum. Nov. Gen. Plum-tree with purple Fruit.
4. ICACO fructu luteo. Houst. The yellow Plum-tree.

These Trees are very common in *Jamaica*, *Barbadoes*, and several other Parts of *America*; where the Fruit is esteemed by some of the Inhabitants, but by others it is thought to cause the dry Gripes. They usually grow to the Height of sixteen or eighteen Feet, and the last Sort doth often rise to the Height of thirty Feet, and spreads into a great Number of Branches.

In *Europe* they are preserved with other curious exotic Plants in the warmest Stoves; for they are too tender to live through the Winter, unless they are kept very warm. They are commonly propagated by sowing of their Stones, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark; observing to water them frequently, as also to cover the Glasses of the Hot-bed every Night, to preserve a Warmth in the Bed. When the Plants begin to appear, they must be carefully weeded, and duly watered; and the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants, to prevent their being drawn up too weak. When these Plants are about three or four Inches high, they should be carefully taken up, and each transplanted into a separate Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to water them duly, as also to shade them from the Sun, until they have taken new Root; after which time the Glasses of the Hot-bed should be raised every Day to admit fresh Air to the Plants, in proportion to the Heat of the Season: these Plants require a pretty large Quantity of Water in hot Weather, and the Pots must be constantly kept clear from Weeds. In this Hot-bed the Plants may remain until *Michaelmas*, when they should be removed into the Stove, and plunged into the Hot-bed of Tanners-bark, where they may enjoy a good Share of Heat.

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During the winter Season the Plants must be frequently watered, but they should not have it in large Quantities, especially in cold Weather, or when they have cast off their Leaves. In Summer they should have a large Share of fresh Air admitted to them in warm Weather, by opening the Glasses of the Stove; but these Plants are too tender to bear the open Air of this Country, even in the hottest Season of the Year; so that they should constantly remain in the Stove, and always should be plunged into the Tan. As the Plants advance in their Growth, so they should be shifted into larger Pots; but they will not require to be transplanted oftener than once a Year, which should always be done the latter End of *March*, or the Beginning of *April*, just before the Plants put out their fresh Leaves.

If these Plants are carefully managed, according to the foregoing Directions, they will thrive very fast, and in three or four Years will produce Fruit, which I have sometimes seen perfectly ripe in *England*; so that they deserve a Place amongst other tender exotic Plants, as a great Curiosity.

In *America* the Inhabitants propagate these Plants by Truncheons or large Branches, which if cut off and planted in the rainy Seasons, take Root very soon, and in a Year or two become large Plants. They are often planted to make Hedges in *Jamaica* and *Barbadoes*, and are esteemed very proper for that Purpose, being quick in Growth.

The Name *icaco*, which Father *Plumier* has applied to this Genus, is the *American* Name, by which the *Creolians* called the Fruit: but of late Years the *English* have given them the Epithet of *Plums*, as being, in their Opinion, somewhat near our *European* Plums.

IMPERATORIA, Masterwort.

The Characters are;

It is planted with a Rose and umbellated Flower, consisting of several Petals, which are sometimes heart-shaped, and sometimes intire, ranged in a Circle, and resting on the Empalement; which afterward becomes a Fruit, composed of two Seeds, which are plain, almost oval, gently streaked and bordered, and generally casting their Cover. To these Marks must be added, that their Leaves are winged, and pretty large.

The Species are;

1. IMPERATORIA major. C. B. P. Common Masterwort.
2. IMPERATORIA Pyrenaica tenuifolia. Tourn. Narrow-leav'd Pyrenean Masterwort.
3. IMPERATORIA Alpina maxima. Tourn. Greatest Masterwort of the Alpes.

The Root of the first Species is used in Medicine; it has a very hot acrid Taste, and is esteemed alexipharmic, sudorific, and a great Attenuater and Opener.

This Sort is cultivated in Gardens to supply the Markets. It may be propagated either by Seeds, or parting of the Roots: if you would propagate it by Seeds, they should be sown in Autumn, soon after they are ripe, on a Bed or Border of light Earth, in a shady

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Situation;

Situation; observing not to sow the Seeds too thick, nor should they be covered too deep. In the Spring the Plants will appear, when they should be carefully weeded, and if the Season should prove very dry, they should be now and then refreshed with Water, which will greatly promote the Growth of the Plants; toward the Beginning of May, if you find the Plants come up too close together, you should prepare a moist shady Border (and thin the Plants carefully, leaving them about four Inches asunder); and plant those which you draw up, into the Border about six Inches apart every Way, being careful to water them duly, if the Season should prove dry, until they have taken Root; after which time, these Plants (as also those remaining in the Seed-beds) will require no other Culture but to keep them clear from Weeds, which may be easily effected by houghing the Ground between the Plants now and then in dry Weather, which will destroy the Weeds, and by stirring of the Ground, will be of great Service to the Plants. The following Autumn, these Plants should be transplanted where they are designed to remain; which should be in a rich moist Soil, and a shady Situation; where they will thrive much better, than if too much exposed to the Sun, or in a dry Soil; for they delight in Shade and Moisture; so that where these are wanting, the Plants will require a constant Supply of Water in dry Weather, otherwise they will thrive but slowly. The Distance which these Plants should be placed, must not be less than twenty Inches, or two Feet every way; for where they like their Situation, they will spread and increase very much. When these Plants are rooted, they will require no other Culture, but to keep them clear from Weeds; and in the Spring before they shoot, the Ground should be every Year gently dug between the Plants; in doing of which great Care should be had, not to cut or bruise their Roots: these Plants, with this Management, will continue several Years, and will produce Seeds in plenty.

If you would propagate these Plants by Off-sets, their Roots should be parted at Michaelmas, and planted in a shady Situation, at the same Distance as has been directed for the seedling Plants, observing to water them until they have taken Root; after which time they must be managed as the Seedlings.

The other two Sorts are preserved in Botanic Gardens for the sake of Variety; but as they are not used in Physic, nor are ornamental Plants, so they are seldom allowed a Place in other Gardens. These two Sorts may be propagated in the same Manner as the former, and are both equally hardy; so that they may be placed in any shady moist cold Situation, where they will thrive very well.

INGA.

This is the American Name of the Plant, for which we have no English Name at present.

The Characters are;

It hath a funnel-shaped Flower, consisting of one

Leaf, whose Tube is furbelowed; from the Flower-cup arises the Pointal, fixed like a Nail in the Hinder-part of the Flower, which afterward becomes a soft fleshy Pod; in which are contained many irregular Seeds inclosed in a sweet Pulp.

We know but one Species of this Plant; viz. *INGA flore albo fimbriato, fructu dulci.* Plum. Nov. Gen. Inga with a white furbelowed Flower, and a sweet Fruit.

This Tree is very common on the North Side of the Island of Jamaica, at La Vera Cruz, and in several other Parts of the Spanish West-Indies; where it rises to the Height of sixteen or twenty Feet, and sends forth many crooked straggling Branches, which hang downward, and are covered with a whitish Bark. The Flowers come out at the Ends of the Branches, which are succeeded by the Pods, which are sometimes eaten by the Negroes.

In Europe this Plant is preserved by those Persons who are curious in exotic Plants; it is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing frequently to water them; and if the Nights are cold, the Glasses of the Hot-bed should be covered as soon as the Sun goes off, in order to preserve a gentle Warmth in the Bed. When the Plants are come up two Inches high, they should be carefully transplanted into separate Pots, filled with light rich Earth, and then plunged into the Hot-bed again, being careful to shade them from the Sun until they have taken new Root; after which time they must be plentifully watered; and in hot Weather the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants, to prevent their being drawn up too weak. At Michaelmas these Plants must be removed into the Stove, and plunged into the Tan in the warmest Part of the Bed. During the winter Season these Plants must be kept very warm, and they must be frequently refreshed with Water; but it must not be given to them in too large Quantities in cold Weather; in the Summer they must be plentifully watered, and in hot Weather they should have a large Share of fresh Air, by opening of the Glasses of the Stove; but they must not be removed out of the Stove, for they are too tender to endure the open Air of this Country, in the warmest Part of the Year. When the Plants have filled the Pots with their Roots, they should be transplanted into larger, and their Roots should be then carefully trimmed: with this Management the Plants will thrive, and in a few Years produce Flowers, so will add to the Variety amongst other tender exotic Plants.

JONTHLASPI, Treacle Mustard.

The Characters are;

It hath a Flower consisting of four Leaves, which are placed in Form of a Cross; out of whose Flower-cup rises the Pointal, which afterward becomes a Fruit, which is flat, round, and shaped like a Buckler, having but one Cell, in which is contained a flat round Seed.

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The Species are;

1. *JONTHLASPI luteo flore, incanum montanum discoides.* Col. Hoary mountain Treacle Mustard, with a yellow Flower.

2. *JONTHLASPI minimum spicatum lunatum.* Col. The smallest spiked Treacle Mustard.

3. *JONTHLASPI orientale, fructu echinato.* Tourn. Cor. Eastern Treacle Mustard, with a prickly Fruit.

The first Sort is found in Plenty upon the Mountains near the *Tiber*; the second Sort grows wild about *Montpelier*, as also in the Fields near *Nismes*, and other Places in the South of *France*; likewise in *Spain* and *Italy*: but the third Sort was discovered by Doctor *Tournefort* in the *Levant*, from whence he sent the Seeds to the *Royal Garden* at *Paris*.

All these Plants are annual, so must be sown every Spring, on a Bed or Border of fresh light Earth; and when the Plants are come up, they should be carefully weeded or houghed, and where they are too close, they should be thinned, leaving them about four or five Inches apart; after this they will require no other Care but to keep them clear from Weeds. In *June* they will flower, and their Seeds will ripen in *August*, which, if permitted to scatter, will come up, and stand through the Winter; and these autumnal Plants will flower early the following Spring. All these Sorts should be sown in the Places where they are designed to remain; for they do not succeed, if they are transplanted. They are all very small Plants, seldom rising above four or five Inches high, so do not make any Figure in a Garden; for which Reason they are seldom propagated, but in Botanic Gardens for the sake of Variety.

IRIS, Flower-de-luce.

The Species omitted in the former Volume are;

1. *IRIS bortenensis latifolia.* C. B. P. Broad-leav'd garden Flower-de-luce.

2. *IRIS latifolia minor alba, oris cœruleis.* Suvert. Small broad-leav'd Flower-de-luce, with white Flowers, having blue Borders.

3. *IRIS latifolia minor alba, oris dilutè purpureis.* H. R. Par. Lesser broad-leav'd Flower-de-luce, with white Flowers with pale purple Borders.

4. *IRIS Asiatica cœrulea polyanthos.* C. B. P. Many-flower'd blue Asiatic Flower-de-luce.

5. *IRIS Asiatica purpurea.* C. B. P. Purple Asiatic Flower-de-luce.

6. *IRIS peregrina subrubens inodora.* C. B. P. Reddish Foreign Flower-de-luce, without Smell.

7. *IRIS peregrina, odore oxyacanthæ.* C. B. P. Foreign Flower-de-luce, smelling like Hawthorn.

8. *IRIS Byzantina purpureo-cœrulea.* C. B. P. Purple blue Flower-de-luce of Constantinople.

9. *IRIS Damascena polyanthos.* C. B. P. Many-flowered Flower-de-luce of Damascus.

10. *IRIS latifolia Germanica, odore suavi.* C. B. P. Broad-leav'd German Flower-de-luce, with a sweet Smell.

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11. *IRIS latifolia Germanica, odore sambuci.* C. B. P. Broad-leav'd German Flower-de-luce, smelling like Elder.

12. *IRIS latifolia Germanica ochroleucos.* C. B. P. Broad-leav'd German Flower-de-luce, with a yellowish white Flower.

13. *IRIS latifolia Germanica candido-purpurea.* C. B. P. Broad-leav'd whitish purple German Flower-de-luce.

14. *IRIS latifolia alba viridis.* C. B. P. White and green broad-leav'd Flower-de-luce.

15. *IRIS latifolia candida, caule aphylo.* C. B. P. Broad-leav'd white Flower-de-luce, with a naked Stalk.

16. *IRIS latifolia Belgica, odore sambuci.* C. B. P. Broad-leav'd Dutch Flower-de-luce, smelling like Elder.

17. *IRIS latifolia Belgica versicolor, odore sambuci.* C. B. P. Broad-leav'd Dutch Flower-de-luce, with a changeable Flower smelling like Elder.

18. *IRIS latifolia Belgica variegata.* C. B. P. Broad-leav'd variegated Dutch Flower-de-luce.

19. *IRIS Belgica cœrulea versicolor.* C. B. P. Blue variegated Dutch Flower-de-luce.

20. *IRIS latifolia humilior purpurea.* C. B. P. Broad-leav'd dwarf purple Flower-de-luce.

21. *IRIS latifolia humilior versicolor.* C. B. P. Broad-leav'd dwarf variegated Flower-de-luce.

22. *IRIS Dalmatica minor.* Clus. *Hisp.* Small Flower-de-luce of Dalmatia.

23. *IRIS palustris lutea.* Tabern. Icon. Yellow marsh Flower-de-luce.

24. *IRIS palustris pallida.* Raii Syn. Pale water Flower-de-luce.

25. *IRIS pratensis angustifolia humilior.* C. B. P. Lower narrow-leaved meadow Flower-de-luce.

26. *IRIS angustifolia candida, lineis rubentibus notata.* C. B. P. White narrow-leav'd Flower-de-luce, striped with reddish Lines.

27. *IRIS angustifolia, prunum redolens, minor.* C. B. P. Smaller narrow-leaved Flower-de-luce, smelling like Plums.

28. *IRIS humilis candicans, venis & orâ cœruleis.* Tourn. Low whitish Flower-de-luce, with blue Veins and Borders.

29. *IRIS humilis Pyrenaica, foliis repandis è luteo virescentibus.* Tourn. Low Pyrenean Flower-de-luce, whose bending Leaves are of a greenish yellow Colour.

30. *IRIS humilis, foliis repandis virescentibus, cum lineis cœruleis.* Tourn. Low Flower-de-luce, whose bending Leaves are greenish, with blue Lines.

31. *IRIS humilis, flore rubello.* Tourn. Dwarf Flower-de-luce with a reddish Flower.

32. *IRIS humilis minor, flore variè picto.* Tourn. Lesser dwarf Flower-de-luce, with a variegated Flower.

33. *IRIS humilis, flore pallido & albo.* Tourn. Dwarf Flower-de-luce, with a pale and white Flower.

34. *IRIS humilis, flore luteo.* Tourn. Dwarf yellow Flower-de-luce.

35. *IRIS humilis, flore pallidè luteo.* Tourn. Dwarf Flower-de-luce, with a pale yellow Flower.

36. IRIS

36. *IRIS humilis candicans, venis variis distincta*. Tourn. Dwarf white Flower-de-luce, striped with various Veins.

37. *IRIS humilis saxatilis Gallica*. Tourn. Dwarf rock Flower-de-luce of France.

38. *IRIS humilis latifolia saxatilis Lusitanica*. Tourn. Dwarf broad-leaved rock Flower-de-luce of Portugal.

39. *IRIS humilis latifolia major acaulis*. Tourn. Greater broad-leaved dwarf Flower-de-luce, without a Stalk.

40. *IRIS humilis orientalis, flore dilute janthino & veluti leucophæo*. Tourn. Cor. Dwarf Eastern Flower-de-luce, with a pale violet-coloured, or, as it were, pale whitish Flowers.

41. *IRIS Americana versicolor, stylo non crenato*. Hort. Elth. Party-coloured American Flower-de-luce, whose Style is not crenated.

42. *IRIS Americana versicolor, stylo crenato*. Hort. Elth. Party-coloured American Flower-de-luce, with an indented Style.

43. *IRIS Virginiana pumila, five Chamæiris verna angustifolia, flore purpureo-cæruleo odorato*. Banist. Dwarf narrow-leaved spring Flower-de-luce of Virginia, with a purple-blue sweet-smelling Flower.

44. *IRIS Virginiana pumila, five chamæiris verna odoratissima latifolia cærulea repens*. Banist. The most sweet-scented, dwarf spring Flower-de-luce of Virginia, with broad Leaves, and a blue Flower.

The nineteen first-mentioned Sorts have been introduced into some curious Gardens, from Germany, Spain, and the Levant, which are the Countries of their natural Growth. These are all of them hardy Plants, which will thrive in the open Air in this Climate, and require very little Care to cultivate them; and as they afford a great Variety, and continue long in Flower, (especially in a shady Position) so they merit a Place in every large Garden. These Sorts usually grow from two to four Feet high in a good Soil; so should be placed amongst hardy Flowers of the same Growth.

The 20th, 21st, and 22d Sorts, are of lower Growth than either of the former; these seldom rise above a Foot high, but have Leaves as broad as those before-mentioned, but they do not spread so fast by their Roots, so do not require so much Room. These Sorts flower earlier in the Spring, than the tall growing Kinds; therefore, if some of these Roots are planted in a warm Position, their Flowers will appear in March; and those which have an East Exposure, will succeed these; so that some of them may be continued near two Months in Beauty.

The 23d and 24th Sorts grow wild in marshy Places in several Parts of England; but the 24th is much less common than the 23d, which is found in standing Waters and Ditches almost every-where. The Roots of this Sort are used in Medicine, under the Title of *Acorus adulterinus*, or false *Acorus*. These two Sorts being very common, are seldom allowed a Place in Gardens; but where there happens a Bog, or any low moist Place in a

Garden, some of these Plants may be planted there to make a Variety.

The 25th Sort grows wild in moist Meadows in France and Germany; but is not a Native of this Country. This Sort hath narrow Leaves, and is a much less Plant than either of the former; so may be allowed a Place in shady moist Borders for the sake of Variety, being a very hardy Plant, and requiring very little Care to cultivate them.

The 26th, 27th, 28th, 29th, 30th, 31st, 32d, 33d, 34th, 35th, 36th, 37th, 38th, 39th, and 40th Sorts, are also of humble Growth, seldom rising above eighteen Inches high; these have also narrow Leaves, and do not spread so much as those Sorts before-mentioned; so may be allowed Places in smaller Gardens, because there is a great Variety in their Flowers. They should be planted in an East Border, where the Soil is rather moist than dry; in which Position they will thrive, and produce a great Number of Flowers. The Places of their natural Growth are mentioned to their different Names; from whence their Seeds or Roots may be procured.

The 41st, 42d, 43d, and 44th Sorts, are Natives of America, from whence their Seeds and Roots have been sent into England: the 41st and 42d Sorts were sent from Maryland, where their Roots are used in Venereal Cafes. These flower late in the Summer, after all the other Sorts are pass'd, so should be admitted into every curious Garden; for they are as hardy, and require as little Care to cultivate them, as any of the before-mentioned Kinds.

All these Sorts of Flower-de-luce may be propagated by parting of their Roots; the best Season for performing this is at Michaelmas, that they may be well rooted before the Frost begins; for if it be delayed till Spring, the Plants will require to be frequently watered, if the Season should prove dry; and they will not flower near so strong, as those which were well rooted before Winter. The dwarf and narrow-leav'd Kinds may be removed and parted every second or third Year; because as these do not spread so fast as the larger Kinds, so they may be easily kept within Compass, without being transplanted often. But all the larger Sorts should be either removed and parted every Year, or dug about and reduced; otherwise they will spread so much as to injure such Plants as grow near them: indeed, in such Places where they are planted under Trees in large Wood-work, where they are allowed Room enough, they may be permitted to grow many Years unremoved.

These large growing Sorts will thrive very well under Trees in Wilderness Quarters (provided the Shade be not too great); in which Places they will continue a long Time in Flower, and make a pretty Variety.

All the Sorts of Flower-de-luce may be propagated by Seeds; the Method for doing of this being exhibited in the former Volume of the *Gardeners Dictionary*, I shall not repeat it here.

ISORA, The Screw-tree.

The Characters are;

It hath a spreading anomalous Flower, consisting of one or many Leaves, divided into several Parts, and appearing like two Lips: from the Bottom of the Flower arises the Pointal, whose Apex afterward becomes a twisted Fruit, consisting of many Cells, which are intorted like a Screw; in which are contained several almost kidney-shaped Seeds.

The Species are;

1. ISORA *albææ foliis, fructu breviori & crassiori*. Plum. Nov. Gen. The Screw-tree with marsh-mallow Leaves, and a shorter and thicker Fruit.

2. ISORA *albææ foliis, fructu longiori & angustiori*. Plum. Nov. Gen. The Screw-tree with marsh-mallow Leaves, and a longer and slenderer Fruit.

3. ISORA *albææ folio amplissimo, fructu crassissimo & viloso*. Houst. The Screw-tree with very large marsh-mallow Leaves, and a very thick hairy Fruit.

These Plants are Natives of the East and West-Indies, where they grow to the Height of ten or twelve Feet, and become shrubby. The first of these Sorts I received from the *Babama Islands*, where it grows in great Plenty; as also in several other Places in the warm Parts of *America*. The second Sort was found by Mr. Robert Millar, Surgeon, at *Carthagena* in the *Spanish West-Indies*, from whence he sent the Seeds to *England*; from which there have been several Plants raised. The third Sort was discovered by Dr. William Houstoun in *Jamaica*; who sent the Seeds and dried Samples of this Kind to *England*.

All these Plants are propagated by Seeds, which should be sown in Pots, filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, being careful to water the Earth as often as it appears dry; and if the Nights prove cold, the Glasses of the Hot-bed should be covered with Mats, to preserve a gentle Warmth in the Bed; but in the Heat of the Day, the Glasses should be raised to let the Steam of the Bed pass off, as also to admit fresh Air. When the Plants begin to appear, they should be gently refreshed with Water three or four times a Week, and the Weeds must be carefully pulled up out of the Pots; otherwise they will soon spread over the young Plants, and destroy them. The Glasses of the Hot-bed must also be tilted every Day when the Weather is warm, to admit fresh Air to the Plants, to prevent their being drawn up too weak; and when they are grown about three Inches high, they should be carefully transplanted, each into a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to shade them until they have taken new Root; after which time the Glasses of the Hot-bed should be raised every Day, in proportion to the Warmth of the Season, to admit fresh Air to the Plants; and they must be frequently watered in hot Weather, for they are thirsty Plants. During the summer Season these Plants may remain in the Hot-

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bed (provided they are not so high as to touch the Glasses); but at *Michaelmas* they should be removed into the Stove, and plunged into the Bark-bed. During the Winter they should be kept very warm, and they must be often watered; and if their Leaves contract Filth, they should be washed with a Sponge; otherwise Insects will attack them, which will weaken and destroy the Plants.

These Plants are too tender to thrive in the open Air in this Climate, if they are exposed thereto, even in the warmest Season; so that they should constantly remain in the Stove, observing in very hot Weather to open the Glasses of the Stove, to admit fresh Air to the Plants, and to give them plenty of Water; as also to shift them into larger Pots, as they increase in Magnitude. With this Management the Plants will thrive very well, and in two Years, from Seed, will produce their Flowers and Fruits.

The Name *Ifora*, which Father Plumier has given to this Genus, is the Indian Name for the Plant; but by the English Inhabitants of *America*, it is called *Screw-tree*, from the Form of the Fruit, which is twisted like a Screw.

JUNCUS, Rush.

The Characters are;

It hath a Flower composed of many Leaves, which are placed orbicularly, and expand in form of a Rose; from the Centre of which rises the Pointal, which afterward becomes a Fruit or Husk, which is generally three-cornered, opening into three Parts, and full of roundish Seeds.

The Species are;

1. JUNCUS *acutus, capitulis sorghi*. C. B. P. Prickly large Sea Rush.

2. JUNCUS *acutus maritimus Anglicus*. Park. English Sea-prickly Rush.

3. JUNCUS *acutus, paniculâ sparsâ*. C. B. P. Common hard Rush.

4. JUNCUS *lævis, paniculâ sparsâ, major*. C. B. P. Common soft Rush.

5. JUNCUS *lævis, paniculâ non sparsâ*. C. B. P. Soft Rush, with a more compact Panicle.

6. JUNCUS *acumine reflexo, major*. C. B. P. The greater bending Rush.

These Sorts of Rushes are not cultivated, but grow wild in several Parts of *England*; and some Sorts of them are very troublesome Weeds, in low moist strong Lands. The first and second Sorts grow on the Sea-shores, where they are frequently watered by the Salt-water. These two Sorts are planted with great Care on the Banks of the Sea in *Holland*, in order to prevent the Water from washing away the Earth; which being very loose, would be in danger of removing every Tide, if it were not for the Roots of these Rushes; which fasten themselves very deep in the Ground, and mat themselves near the Surface, so as to hold the Earth closely together. Therefore, whenever the Roots of these Rushes are destroyed, the Inhabitants immediately repair them, to prevent farther Damage. In the Summer-time, when the Rushes are fully grown, the Inhabitants cut them, and tie them up into Bundles,

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which

which are dried, and afterward carried into the larger Towns and Cities, where they are wrought into Baskets, and several other useful Things, which are frequently sent into England. These Sorts do not grow so strong in England as they do on the *Maeze*, and some other Places in *Holland*, where I have seen them upward of four Feet high.

The third and fourth Sorts grow on moist strong uncultivated Lands in most Parts of England, and destroy the Herbage where they are suffered to remain. The best Method of destroying these Rushes, is to pare them up clean in July; and after having let them lie a Fortnight or three Weeks to dry, to lay them in Heaps, and burn them gently; and the Ashes which these afford, will be good Manure for the Land; but in order to prevent their growing again, and to make the Pasture good, the Land should be drained and well ploughed, and sown with *Rygrafs*, which will make a good Sward in one Year, if it be rightly managed; for the right ordering of which you are desired to turn to the Article *Pasture*, where there are proper Instructions exhibited.

JUNIPERUS, Juniper.

To this Article must be added;

1. JUNIPERUS *minor montana, folio latiore, fructuque longiore*. C. B. P. Lesser mountain Juniper, with a broader Leaf, and a longer Fruit.
2. JUNIPERUS *major, baccâ caeruleâ*. C. B. P. Greater Juniper, with a blue Berry.
3. JUNIPERUS *major, baccâ rufescente*. C. B. P. Greater Juniper, with a reddish Berry.
4. JUNIPERUS *Cretica, ligno odoratissimo, xidg. Græcorum recentiorum*. Tourn. Cor. Juniper of Crete, with a sweet-scented Wood; which is the Cedar of the modern Greeks.
5. JUNIPERUS *latifolia arborea, cerasi fructu*. Tourn. Cor. Broad-leav'd Eastern Tree Juniper, with a cherry-shaped Fruit.
6. JUNIPERUS *orientalis, vulgari similis, magno fructu nigro*. Tourn. Cor. Eastern Juniper, like the common Sort, with a large black Fruit.

The first Sort here mentioned grows in great Plenty in the *Alpes*, and also on the Hills in *Germany*. The second Sort grows wild in the *Pyrenean Mountains*, and also on some Hills in the *South of France*. The third Sort grows plentifully in *Spain*, from whence the Berries have been brought to *England*, and many Plants have been raised. The fourth, fifth and sixth Sorts were discovered by Dr. *Tournfort* in the *Levant*, from whence he sent their Berries to the *Royal Garden at Paris*. The fourth Sort hath a sweet-scented Wood, somewhat like that of *Bermudas*, and is by the modern Greeks called *Cedar*.

All these Sorts may be propagated by sowing of their Berries early in the Spring, on Borders of light fresh Earth, which are exposed to the Morning-Sun, covering them about half an Inch thick with light Earth.

These Berries will remain in the Ground one whole Year, so that during that Time the Ground should be kept clear from Weeds, and in very dry Weather the Borders should be now and then watered. The following Spring the Plants will begin to appear, when they must be kept very clear from Weeds, and in dry Weather they should be duly watered. With this Management the Plants will make a considerable Advance the first Season, so that they will be fit to transplant the following Spring; when you should prepare some Beds of fresh Earth in a sheltered Situation, into which the Plants must be removed just before they begin to shoot, and planted about a Foot asunder every way. In doing of this great Care should be taken not to break or tear the Roots of the Plants, and also to plant them as soon as possible; for if they remain but two or three Hours out of the Ground, their Roots will dry, and the Plants rarely survive their Removal. This Work should also be done in moist or cloudy Weather, when the Air is soft; for if it is done when the dry easterly Winds reign, the Plants seldom thrive. When they are planted, the Surface of the Ground about their Roots should be covered with Mulch, to prevent the Sun and Wind from penetrating the Earth to their Roots, which, if not prevented, will destroy the Plants. In dry Weather they should be now and then gently watered; but they should by no means have too great Quantity of Moisture; for that will rot their tender Fibres, and destroy the Plants.

In these Beds the Plants should remain two Years, during which Time the Ground should be kept constantly clear from Weeds; and the Spring after transplanting, the Ground should be gently dug, to loosen it, being careful not to expose the Roots of the Plants to the Air. And at the two Years End, they may be removed to the Places where they are designed to remain, provided the Ground is ready; but if the Plantation is not laid out, then the Plants should be removed into a Nursery, for a Year or two longer, placing them in Rows three Feet apart, and the Plants two Feet asunder in the Rows. This should also be done in the Spring, just before they begin to shoot; and the same Care should be had to mulch their Roots as before, as also to do the Work in moist and cloudy Weather. When the Plants have taken Root either in the Nursery, or in the Plantation where they are designed to remain, they will require no other Care but to keep them clear from Weeds, until the Plants are grown strong enough to bear down the Weeds, and keep them under.

The second, third and fourth Sorts rise to a great Height, and will grow to a pretty large Size; so these should be planted amongst other Evergreen-trees of the same Growth, where they will afford an agreeable Variety; for they are naturally disposed to grow in a pyramidal Form, somewhat like the *Cypress*; and may be planted round Buildings, where they will make a fine Appearance. They are all of them hardy enough to resist the Cold

of our Winters, and will grow on stony cold Lands.

The other Sorts are of humbler Growth, so may be planted amongst lower evergreen Shrubs, in Front of the larger Trees, where they may be placed so as to render them very beautiful, and greatly to add to the Variety. The first Sort seldom rises above a Foot high; but the others will grow to the Height of five or six Feet, and have nearly the same Appearance with our common *Juniper*.

JUSTICIA.

This Plant was so named by the late Dr. *Houftoun*, in Honour to *James Justice*, Esq; a great Lover and Encourager of Gardening and Botany.

The Characters are;

It hath an anomalous Flower consisting of one Leaf, which is divided into two Lips almost to the Bottom, the under one being for the most part intire, but the upper Lip is divided into two; the Flowers are succeeded by inversed spear-shaped Fruit, which have one Cell, containing many flat Seeds.

The Species are;

1. *JUSTICIA annua, hexangulari caule, foliis circae conjugatis, flore miniato.* *Houft.* Annual *Justicia*, with an hexangular Stalk, Enchanters Night-shade Leaves growing opposite, and a carmine Flower.

2. *JUSTICIA frutescens, floribus spicatis majoribus, uno versu dispositis.* *Houft.* Shrubby *Justicia*, with larger Flowers growing in Spikes, appearing on one Side of the Stalk.

These two Plants were discovered by the late Dr. *Houftoun*, at *la Vera Cruz*, from whence he sent the Seeds and Specimens to *England*. The first Sort grows about two or three Feet high, and perishes soon after the Seeds are ripe; but the second Sort grows to the Height of six or seven Feet, and divides into many Branches, which become woody; at the End of the Branches the Flowers are produced in Spikes, which are of a carmine Colour.

These Plants may be propagated by Seeds, which should be sown early in the Spring in small Pots filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to water the Earth gently as it appears dry, and also to cover the Glasses of the Hot-bed every Night, to preserve a kindly Warmth in the Bed. When the Plants begin to appear, the Weeds should be carefully pulled out of the Pots, and the Glasses of the Hot-bed should be raised every Day when the Weather is warm, to admit fresh Air to the Plants; but if the Nights are cold, the Glasses should be duly covered with Mats soon after the Sun is gone off from the Bed. The Plants must also be frequently water'd in warm Weather; but it should not be given to them in large Quantities while the Plants are young, because they are then very tender, and subject to rot at the Bottom of their Stems, with much Moisture.

When the Plants are about two Inches high, they should be carefully taken up, and each

transplanted into a separate small Pot filled with light fresh Earth, and then plunged into the Hot-bed again, being careful to water and shade the Plants until they have taken new Root; after which Time they should have Air admitted to them every Day, in proportion to the Warmth of the Season, and they should be duly watered every Day in hot Weather.

As the Plants advance in their Growth, so they should be shifted into larger Pots; for if their Roots are too much confined, the Plants will not make any considerable Progress; but they should not be over-potted, for that will be of worse Consequence than under-potting of them; for when they are planted in very large Pots, they will starve and decay, without producing any Flowers. These Plants are too tender to endure the open Air in this Country, therefore they should always remain in the Hot-bed, being careful to let them have a due Proportion of Air in hot Weather: and the annual Sort should be brought forward as fast as possible in the Spring, that the Plants may flower early, otherwise they will not produce good Seeds in *England*.

The second Sort should remain in the Hot-bed during the summer Season (provided there be Room under the Glasses, without being scorched); but at *Michaelmas*, they should be removed into the Stove, and plunged into the Bark-bed; where they must remain during the winter Season, observing to keep them warm, as also to water them gently two or three times a Week, according as they shall require. The following Summer these Plants will flower, and will abide several Years; but they rarely produce good Seeds in *Europe*.

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KALI, Glasswort.

The Characters are;

It hath a Flower consisting of many Leaves, which are placed in a Circle, and expand in form of a Rose: out of the middle of which rises the Pointal, which afterward becomes an almost globular membranaceous Fruit, containing one single Seed, which is twisted like a Periwinkle, and generally infolded in the Leaves of the Flower.

The Species are;

1. *KALI majus, cochleato semine.* C. B. P. Snail-seeded Glasswort.

2. *KALI spinosum, foliis longioribus & angustioribus.* *Tourn.* Prickly Glasswort, with longer and narrower Leaves.

3. *KALI spinosum, foliis crassioribus & brevioribus.* *Tourn.* Prickly Glasswort, with thicker and shorter Leaves.

4. *KALI Siculum lignosum, floribus membranaceis.* *Bocc. Rar. Plant.* Sicilian ligneous Glasswort, with membranaceous Flowers.

5. *KALI fruticosum Hispanicum, tamarisci folio.* *Tourn.* Shrubby Spanish Glasswort, with a Tamarisk Leaf.

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6. *KALI fruticosum Hispanicum, genistæ fronde. Tourn.* Shrubby Spanish Glasswort, with Broom-tops.

7. *KALI fruticosum Hispanicum, capillaceo folio villoso. Tourn.* Shrubby Spanish Glasswort, with a hairy and downy Leaf.

8. *KALI foliis longioribus & angustioribus subhirsutis. Tourn.* Glasswort, with longer and narrower somewhat hairy Leaves.

9. *KALI orientale fruticosum spinosum, campboratæ folio. Tourn. Cor.* Eastern shrubby prickly Glasswort, with a stinking ground-pine Leaf.

10. *KALI orientale fruticosum, flore maximo albido. Tourn. Cor.* Eastern shrubby Glasswort, with a very large whitish Flower.

11. *KALI orientale fruticosum, foliis sedi minoris, flore purpureo. Tourn. Cor.* Eastern shrubby Glasswort, with Leaves like the lesser Housleek, and a purple Flower.

12. *KALI orientale fruticosum altissimum, florum staminibus purpureis. Tourn. Cor.* The tallest shrubby Eastern Glasswort, with Flowers having purple Stamina.

13. *KALI orientale fruticosum lanuginosum. Tourn. Cor.* Woolly Eastern shrubby Glasswort.

14. *KALI orientale fruticosum, linariæ folio. Tourn. Cor.* Eastern shrubby Glasswort, with a toad-flax Leaf.

15. *KALI orientale fruticosum, flore magno purpureo. Tourn. Cor.* Shrubby Eastern Glasswort, with a large purple Flower.

16. *KALI orientale fruticosum, floribus albis. Tourn. Cor.* Shrubby Eastern Glasswort, with white Flowers.

17. *KALI orientale spinosum subhirsutum, tenuissimo folio. Tourn. Cor.* Prickly Eastern hairy Glasswort, with a very narrow Leaf.

18. *KALI orientale, capillaceo folio, flore purpurascens. Tourn. Cor.* Eastern Glasswort, with a capillaceous Leaf, and a purplish Flower.

The first Sort here mentioned grows wild in the *Mediterranean* in several Places, where it is gathered for the making *Sode*, which is a sort of Pot-ash used in the making of Soap. It is also cultivated in the South of *France*, in salt Marshes, for the same Purpose. This Plant seldom grows large, unless it is cultivated, which greatly improves its Size, so that it often grows from two to three Feet high, and divides into many Branches, whereas in the natural Places of its Growth, it is seldom above a Foot high. The *Spaniards* also cultivate several of the Species here mentioned, in order to make *Sode* thereof, the best of which is brought from *Alicant* and *Cartagena*. I believe most of the Sorts may be used indifferently for the making Pot-ash; for in the several Countries, from whence we have the Pot-ash, it is made of different Sorts. But the best Pot-ash is that which comes from the *Levant*, which is called *Barillia*; the Salt of these Ashes are clear and white, so is used in making of the finest Glass, and the hardest Soap. But this is made of a different Plant from any of this Genus, and is before mentioned under the article *Ficoides*.

The Inhabitants of those warmer Countries, who cultivate these Plants, sow their Seeds

early in the Spring, on low marshy Grounds near the Sea, or on salt Ponds, where the Plants soon come up, and in about three Months will be fit to cut for Use; when they mow it down, and dry it after the manner of Hay. When it is well dried, they dig Holes or Pits, in the nature of *Lime-Kilns*; then they set Fire to a Bundle of the Herb, which they throw into the Pit; and after that they throw three or four more Bundles into the Pit, which they suffer to be well lighted; then they fill the Pit with the dried Herb, and stop the Top of it up, leaving it to consume for some Time, to be reduced to Ashes. When they open the Pit, they find the Salt incorporated into a solid Rock, which they are obliged to break and raise up as Stones out of a Quarry.

There are some sorts of Pot-ash, which are made of many Kinds of Sea-weeds; but these are very little esteemed; they may be easily known by their dark Colour, and fetid Scent, as also by their Moisture.

The third and fourth Sorts of Glasswort grow at a greater Distance from the Sea: these are frequently preserved in Botanic Gardens, for Variety, as are some of the other Species, tho' there are not many Kinds which will perfect their Seeds in *England*. All the Kinds are propagated by Seeds, which should be sown the Beginning of *March*, on a Bed of fresh light Earth in an open Situation; and when the Plants come up, the Weeds should be carefully drawn out from amongst them; and where the Plants are too close, they should be thinned, so as to leave them about six or eight Inches asunder every way: as the Plants advance, so they should be kept clear from Weeds; and the last Time of thinning of the Plants, they should be left a Foot asunder, which will be sufficient Room for any of the Sorts to grow to Maturity. These Plants flower in *July* and *August*, and if the Autumn proves warm, some of the Sorts will produce ripe Seeds about *Michaelmas*.

As these Plants do not bear Transplanting, so where they are cultivated for Use, the best Method will be to hough the Plants soon after they come up, as is practised for *Turnips*, *Carrots*, and several other esculent Plants, which will destroy the Weeds, when it is carefully performed in dry Weather; and by stirring of the Ground between the Plants, it will occasion their growing much larger than where this is not practised. But as our Seasons in *England* are seldom warm enough to bring these Plants to Perfection, so it is not worth the Trouble of cultivating here. In some of the *English Colonies* in *America*, this Commodity may pay the Inhabitants very well, if they would cultivate it; but then I should advise the sowing the *Barillia* only, which is the most valuable Kind.

KARATAS, The Penguin or wild Ananas.
The Characters are;

It hath a tubulous bell-shaped Flower, which is divided into three Parts at the Mouth; from whose Calyx arises the Pointal, fixed like a Nail in the binder Part of the Flower; which afterwards

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ward becomes a fleshy almost conical Fruit, which is divided by Membranes into three Cells, which are full of oblong Seeds.

There is but one Sort of this Plant at present known, which is.

KARATAS foliis altissimis, angustissimis & aculeatis. Plum. Nov. Gen. The wild Ananas or Penguin.

Father Plumier has made a great Mistake in the Figure and Description of the Characters of this Plant, and the *Caraguata*; for he has joined the Flower of the *Caraguata* to the Fruit of the *Karatas*, and vice versa.

This Plant is very common in the *West-Indies*, where the Juice of its Fruit is often put into *Punch*, being of a sharp acid Flavour. There is also a Wine made of the Juice of this Fruit, which is very strong; but it will not keep good very long, so is only for present Use. This Wine is very intoxicating, and heats the Blood; therefore should be drank very sparingly.

In *England* this Plant is preserved as a Curiosity; for the Fruit seldom arrives to any Degree of Perfection in this Country; and if it were to ripen as thoroughly here, as in its native Country, it would be little valued on account of its great Austerity; which will often take the Skin off from the Mouths and Throats of those People, who eat it incautiously.

This Plant is propagated by Seeds; for tho' there are often Suckers sent forth from the old Plants, yet they coming between the Leaves, are so long, slender, and ill-shapen, that if they are planted, they seldom make regular Plants. These Seeds should be sown early in the Spring, in small Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners Bark, observing, if the Nights should prove cold, to cover the Glasses with Mats, to keep the Bed in a due Temper of Heat; as also gently to water the Earth, as often as it appears dry. When the Plants are come up, they should be carefully cleared from Weeds; and in the Day-time the Glasses of the Hot-bed should be raised, to admit fresh Air to the Plants, that they may not draw up too weak; they must also be frequently refreshed with Water. When the Plants are strong enough to transplant, they should be carefully taken up, each planted into a separate Pot, filled with light rich Earth, and plunged into the Hot-bed again, observing to refresh them frequently with Water, until they have taken new Root; after which Time they should have Air and Water in proportion to the Warmth of the Season. In this Bed the Plants may remain till *Michaelmas*, at which Time they should be removed into the Stove, and plunged into the Bark-bed, where they should be treated in the same manner as the *Ananas*.

These Plants will not produce their Fruit in *England*, until they are three or four Years old; so they should be shifted into larger Pots, as the Plants advance in their Growth; for if their Roots are too much confined, they will make but little Progress. They should also be placed at a pretty great Distance from each other; for their Leaves will be three or four

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Feet long, which turning downward, occupy a large Space.

KEMPFERA.

This Plant was so named by the late Dr. Houstoun, in Honour to the Memory of Dr. Kempfer, a learned Botanist.

The Characters are;

It hath an anomalous Flower consisting of one Leaf, and divided at the Brim into five Parts: after the Flower is parted, the Pointal becomes a hard Fruit, which is divided into four Cells, which are full of small Seeds.

We know but one Sort of this Plant, (*viz.*)

KEMPFERA frutescens, chamædryos foliis, floribus spicatis cæruleis. Houst. Shrubby *Kempfer*, with a *Germander* Leaf; and blue Flowers growing in a Spike. This Plant is figured and described in the *Paradisus Batavus*, under the Title of *Veronica similis fruticosa Curassavica, teucris foliis, flore galericulato.*

It is very common in *Jamaica*, and several other Islands in the *West-Indies*, where it grows to the Height of three or four Feet, and becomes woody. The Flowers are produced in Spikes at the Extremity of the Branches, which are of a fine blue Colour.

This Plant is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, which must be plunged into a Hot-bed of Tanners-bark, where they must be kept warm, and frequently refreshed with Water. In about five Weeks the Plants will begin to appear, when they must be carefully cleared from Weeds, and duly watered; but this must be done very gently, because the Plants are very tender while they are young. In the middle of the Day, the Glasses of the Hot-bed should be raised to admit fresh Air to the Plants, to prevent their drawing up too weak; but if the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats, soon after the Sun is gone off the Bed, to keep the Bed in a due Temperature of Warmth. When the Plants have obtained sufficient Strength to transplant, they should be carefully turned out of the seed Pots, and parted, placing each into a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to water them pretty well to settle the Earth to their Roots, as also to cover the Glasses every Day with Mats, to screen the Plants from the Sun, until they have taken new Root, after which Time they should have fresh Air admitted to them every Day, in proportion to the Warmth of the Season; and they must be frequently watered in hot Weather, for they naturally grow on moist Places.

In this Hot-bed the Plants may remain during the Summer Season; but at *Michaelmas*, they should be removed into the Stove, and plunged into the Bark-bed, where they must be kept very warm during the Winter Season, for they are very impatient of Cold; they should also be frequently refreshed with Water, but it must be given to them in small Quantities during the cold Weather; for they are

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very subject to rot with too much Moisture at that Season. In the Spring of the Year the Plants may be removed into a fresh Hot-bed of Tanners-bark, which will greatly forward their Growth; but there should be great Care the Bed be not too hot, lest it scorches their Roots. If the Plants thrive well the first Season, they will flower the second Summer; but they seldom produce good Seeds in this Country, however the Plants may be maintained several Years, with proper Care.

KETMIA.

To this Article must be added;

1. KETMIA *Indica, folio hastato, fructu duro.* Tourn. Indian Ketmia, with a spear-shaped leaf, and a hard Fruit.

2. KETMIA *Ægyptiaca, vitis folio, parvo flore.* Tourn. Egyptian Ketmia, with a Vine-leaf, and a small Flower.

3. KETMIA *Americana aculeata, flore amplissimo coccineo.* Plum. Cat. Prickly American Ketmia, with a very large scarlet Flower.

4. KETMIA *Americana, amplissimo folio cordiformi, flore vario.* Plum. Cat. American Ketmia, with a very large heart-shaped Leaf, and a variable Flower.

5. KETMIA *Americana frutescens, mori folio, flore purpureo.* Plum. Cat. American shrubby Ketmia, with a mulberry Leaf, and a purple Flower.

6. KETMIA *Americana, amplissimo folio angulato, fructu hispido clypeato.* Plum. Cat. American Ketmia, with a large angular Leaf, and a rough Fruit shaped like a Shield.

7. KETMIA *Indica, tilia folio.* Plum. Cat. Indian Ketmia, with a lime-tree Leaf, commonly called the Mangrove-Tree in America.

8. KETMIA *Indica, folio angusto, longissimo & crenato, flore phœnicio.* Indian Ketmia, with a narrow very long crenated Leaf, and a scarlet Flower.

9. KETMIA *Indica humilis, folio dissecto aspero, flore parvo candido, instar jasmimi Hispanici explicato, fundo purpurascente.* Breyn. Low Indian Ketmia, with a rough cut Leaf, and a small white Flower, which when open, is like the Flower of Spanish Jasmine, having a purple Bottom.

10. KETMIA *Indica humilis, folio dissecto, flore parvo purpureo.* Low Indian Ketmia, with a cut Leaf, and a small purple Flower.

All these Sorts of Ketmia are tender Plants, being Natives of the warmest Climates; the eight first mentioned Sorts will abide two or three Years, provided they are kept in a warm Stove in Winter, tho' all of them will produce Flowers and good Seeds the first Season, (provided they are brought forward early in the Spring) except the seventh Sort, which grows to the Height of fifteen or sixteen Feet, so seldom flowers in its native Country until the second or third Year. The ninth and tenth Sorts are annual Plants, which perish soon after they have perfected their Seeds.

These Plants are propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up two Inches high, they should be each trans-

planted into a separate small Pot, filled with light rich Earth, and plunged into the Hot-bed again, observing to water and shade them until they have taken new Root; after which Time they should have a large Share of fresh Air in warm Weather, and must be frequently watered. As the Plants advance in their Growth, so they should be shifted into larger Pots, and brought forward in Hot-beds after the manner directed for *Amarantbs*; by which Method they may be brought to flower in July, and their Seeds will ripen in September.

The seventh Sort grows naturally in low swampy Places in the *West-Indies*, where their Branches bend down to the Earth, and send forth Roots, so that one single Plant will in few Months have many Trunks, which will spread over a large Spot of Ground. The Bark of these Trees is wrought into Ropes, and is of great Use to the Inhabitants of *America*.

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LACRYMA OBI, Job's Tears.

The Species are;

1. LACHRYMA JOBI. Clus. Hist. Common Job's Tears.

2. LACHRYMA JOBI *latiore folio*, Tourn. Broad-leav'd Job's Tears.

3. LACHRYMA JOBI *Americana altissima, arundinis folio & facie.* Plum. Tallest American Job's Tears, with a Leaf and the Face of Reeds.

The first Sort is often used by the Inhabitants of *Spain* and *Portugal*, to make Bread, in a Scarcity of Corn. The second Sort is a Variety of the first, from which it differs, in having a much broader Leaf. These are seldom cultivated in *England*, unless in some curious Gardens for the sake of Variety. These are both annual Plants, which must be sown the Beginning of *March*, on a warm Border of light Earth, at about a Foot asunder or more, and require no other Care, but to keep them clear from Weeds; and if the Season proves warm, they will perfect their Seeds very well in this Country.

The third Sort grows plentifully in several Parts of *America*, where the poorer Sort of Inhabitants make a kind of Flour of the Seeds, with which they make Cakes to serve them, instead of Bread. This Sort has been brought into *Europe*, but the Seeds have not come to Perfection in this Country; for it requires much Warmth, and a long Summer, to ripen it. The Roots of this Kind have remained in the open Air thro' the Winter, and have made fresh Shoots the following Spring; so that I believe it is a biennial Plant in its native Country. If this Sort is propagated in *England*, as a Curiosity, the surest Method to bring it to Perfection is, to sow the Seeds in small Pots, filled with light Earth, and plunge

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plunge them on a moderate Hot-bed, to bring up the Plants. As soon as these appear, they should have a large Share of fresh Air admitted to them, to prevent their being drawn up weak; and when the Weather is warm, they should be inured to bear the open Air by degrees, into which the Plants must be removed about the middle of April; at which Time it will be proper to shift them into larger Pots, and place them in a warm Situation, being careful to water them frequently in dry Weather. By this Management the Plants having their Roots confined in the Pots, will not grow so large, as those in the full Ground, so will sooner produce Seed. If the Season proves favourable, you may hope to bring it to Perfection: but whenever it fails, the Pots may be removed into the Green-house in Autumn, where the Plants may be preserved thro' the Winter; and thereby good Seeds may be obtained the following Season.

LAMIUM, Dead-Nettle.

The Characters are;

It hath a labiated Flower consisting of one Leaf, whose upper Lip is hollow like a Spoon; but the under one is divided into two Segments, in the form of a Heart, and both end in Chaps, which are brimmed and edged; out of the Flower-cup, which is fistulous, and cut into five Segments, rises the Pointal, fixed like a Nail in the hinder Part of the Flower; and attended, as it were, by four Embryos, which afterwards become so many triangular Seeds, shut up in a Husk, which was before the Flower-cup.

The Species are;

1. LAMIUM purpureum fatidum, folio subrotundo, five Galeopsis Dioscoridis. C. B. P. purple stinking Archangel or Dead-Nettle.
2. LAMIUM purpureum fatidum, folio subrotundo, minus. H. L. Lesser purple stinking Dead-Nettle.
3. LAMIUM folio oblongo, flore rubro. Park. Theat. Archangel with an oblong Leaf, and a red Flower.
4. LAMIUM album, non fatens, folio oblongo. C. B. P. White Archangel or Dead-Nettle.
5. LAMIUM parietariae facie. Moriss. H. R. Blef. Dead-Nettle, with the Face of Pellitory.
6. LAMIUM folio caulum ambiente, minus. C. B. P. Lesser Dead-Nettle, with the Leaves encompassing the Stalk.
7. LAMIUM rubrum minus, foliis profunde incis. Raii Syn. Lesser red Dead-Nettle, whose Leaves are deeply cut.
8. LAMIUM album fatidum, folio subrotundo, minus. C. B. P. Lesser stinking Dead-Nettle, with white Flowers and a roundish Leaf.
9. LAMIUM foliis, caulem ambientibus, majus. C. B. P. Greater Dead-Nettle, with the Leaves encompassing the Stalk.
10. LAMIUM orientale, nunc moschatum, nunc fatidum, magno flore. Tourn. Cor. Eastern Dead-Nettle, sometimes sweet-scented, and sometimes stinking, with a large Flower.
11. LAMIUM orientale, foliis eleganter lacinatis. Tourn. Cor. Eastern Dead-Nettle, with elegantly jagged Leaves.

12. LAMIUM orientale incanum, flore albo, cum labio superiori crenato. Tourn. Cor. Hoary Eastern Dead-Nettle, with a white Flower, whose upper Lip is notched.

13. LAMIUM orientale incanum, flore purpurascens, cum labio superiori crenato. Tourn. Cor. Hoary Eastern Dead-Nettle, with a purplish Flower, whose upper Lip is notched.

14. LAMIUM orientale album latifolium altissimum. Tourn. Cor. Tallest Eastern Dead-Nettle, with a broad Leaf, and a white Flower.

The first, second, sixth, seventh, eighth and ninth Sorts, are annual Plants, which grow wild on dry Banks in several Parts of England; so are rarely preserved but in Botanic Gardens, for the sake of Variety. All these Sorts flower in March and April, and their Seeds are ripe soon after, which if permitted to scatter, the Plants will come up in great Plenty, and become troublesome Weeds. The first Sort is used in Medecine; but the Markets are supplied with it, from the Fields.

The fourth Sort is also very common under Hedges, in divers Parts of England; this is also used in Medecine. The Roots of this Sort spread very far under Ground; so where it once fixes, it is very difficult to eradicate, especially under Hedges or Trees, where the Roots of this Plant will intermix with those of the Plants, so that they cannot be easily taken out, without disturbing the Roots of the Plants. The third Sort is a Variety of the fourth, from which it differs in the Colour of the Flowers, which in this are of a bright red Colour. These two are abiding Plants, which propagate themselves very fast by their creeping Roots.

The fifth, tenth and eleventh Sorts, are annual Plants, which do not grow wild in England, but are equally hardy with those before-mentioned. These flower early in the Spring, and if their Seeds are permitted to scatter, the Plants will come up in the Autumn in great Plenty. The fifth Sort has no great Beauty, so is only preserved for Variety, being very like our common Dead-Nettle, except in the Difference of the Leaf. But the tenth Sort deserves a Place in some abject Part of the Garden, for the Beauty of its Leaves in Winter, which are variegated somewhat like the common Cyclamen, and make an Appearance very like that Plant in Winter. These Leaves, in dry Weather, have a musky Scent on their being gently rubbed; but if they are bruised, they become stinking and disagreeable.

The twelfth, thirteenth and fourteenth Sorts, are abiding Plants, which will trail on the Ground, and send forth Roots from the Joints of their Stalks, whereby they propagate themselves very fast; so where-ever they are permitted to have Room in a Garden, they should be kept within Compass; otherwise they will spread, and become troublesome.

LAMPSANA, Nipplewort.

The Characters are;

It hath a semiflosculous Flower, consisting of many half Florets, upon which the Embryos sit, and are included with them in a multifid Cup, consisting of one Leaf, which afterward becomes a streaked Vessel including many narrow-pointed Seeds.

The Species are;

1. LAMPSANA. *Dod. Pempt.* Common Nipplewort.

2. LAMPSANA *folio amplissimo crispo. Petiver.* Nipplewort with a large curled Leaf.

3. LAMPSANA *orientalis elatior, foliis nigris maculis aspersis. D. Sherard.* Taller Eastern Nipplewort, with Leaves spotted with black Marks.

The first Sort is a very common Weed on dry Banks, and on the Way-sides, in most Parts of *England*; the other two Sorts were brought from abroad into the Botanic Gardens, where they are preserved for Variety, but they are not allowed a Place in any other Gardens.

These are all annual Plants, which flower in *April*, and their Seeds ripen in *June*, which if permitted to scatter, will stock the Ground with Plants; so that where they are admitted, there should be but few of the Plants suffered to seed, and those should be in some rude abject Part of the Garden, lest by their scattering Seeds, they should fill the Garden, and overbear such Plants, as better deserve a Place.

But where the common Sort hath been suffered to shed its Seeds, and thereby become a troublesome Weed, it may be destroyed by keeping it houghed down before it comes to flower, so that no Plants be permitted to scatter Seeds; for as it is an annual Plant, so where-ever Care is taken to prevent its Seeding, it will in two or three Years be absolutely destroyed.

The first Sort was formerly used in Medicine in *England*, and is still continued in Use in other Countries: but it is not mentioned by the College of Physicians in their Dispensatory.

LAND. Its Improvement.

1. By Inclosing.

Inclosing of Lands, and dividing the same into several Fields, for Pasture or Tillage, is one of the most principal Ways of Improvement, first, by ascertaining to every Man his just Property, and thereby preventing an Infinity of Trespasses and Injuries, that Lands in common are subject unto; and, secondly, it being of itself a very great Improvement; for where Land is properly inclosed, and the Hedge-rows planted with Timber-trees, &c. it preserves the Land warm, and defends and shelters it from the violent cold nipping Winds, which in severe Winters frequently destroy much of the Corn, Pulse, or whatsoever grows on the open Field or champain Grounds. And where it laid down for Pasture, it yields much more Grass than the open Fields, and

the Grass will begin to grow much sooner in the Spring. The Hedges and Trees also afford Shelter for the Cattle, from the cold Winds in Winter, as also Shade for them in the great Heats of Summer. And these Hedges afford the diligent Husbandman Plenty of Fuel, as also Plough-boot, Cart-boot, &c. And where they are carefully planted and preserved, furnish him with Timber, and Mast for his Swine: or where the Hedge-rows are planted with Fruit-trees, there will be a Supply of Fruit for Cyder, Perry, &c. Which in most Parts of *England*, are of no small Advantage to the Husbandman.

By this Method of Inclosing, there is also much more Employment for the Poor, and is therefore a good Remedy against Beggery; for in those open Countries, where there are great Downs, Commons, Heaths and Wastes, there is nothing but Poverty and Idleness to be seen amongst the Generality of their Inhabitants. It is very observable of late Years, how much advantage the Inclosing of the Land in *Worcestershire*, and some other Counties at a Distance from *London*, has been to the Inhabitants; for before this Method was introduced amongst them, the Lands for the most part lay in Commons, &c. Upon which the poorer Sort of People built themselves Cottages with mud Walls, where they contented themselves with a Cow or two, and some Swine: and those of them who were more industrious than the rest, travelled to the Neighbourhood of *London* every Spring, where they were employed in the Gardens and Fields for the Summer Season, and in Autumn they returned to their native Countries, where they lived in Winter, upon what Money they had saved in Summer. But since they have converted their Wastes and Commons into Inclosures, there are but few of the Inhabitants of those Countries, who come to *London* for Work, in comparison to the Numbers that formerly came; so that most of the Labourers, who come to *London* for Employment, are either *Welsh*, or Inhabitants of some distant Counties, where this Improvement hath not as yet been introduced.

The advantages of inclosing Land are now so generally known, that there is no Occasion for me to enumerate them here; since the Improvements which have been made of late Years, in several Parts of *England*, and the Increase of Rent, that is every-where made by those who inclose, are sufficient Arguments, to enforce the Practice, and render it general; more especially in the North, where it is most neglected; because it would greatly shelter the Lands, and render them much warmer than they now are.

In inclosing of Land, there should be regard had to the Nature of the Soil, and what it is intended for; because Corn-Land should not be divided into small Parcels; for besides the Loss of Ground in Hedges, &c. the Corn doth seldom thrive so well in small Inclosures, as in more open Fields; especially where the Trees are large in the Hedge-rows. The
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Grass also in Pastures is not so sweet near Hedges, or under the Drip of Trees, as in an open Exposure; so that where the Inclosures are made too small, or the Land over-planted with Trees, the Herbage will not be near so good, nor in so great Plenty, as in larger Fields. Therefore, before a Person begins to inclose, he should well consider how he may do it to the greatest Advantage: as for instance, it is always necessary to have some smaller Inclosures near the Habitation, for the Shelter of Cattle, and the Conveniency of shifting them from one Field to another, as the Season of the Year may require; and hereby the Habitation, Barns, Stables and Out-houses, will be better defended from strong Winds, which often do great Damage to those that are exposed to their Fury. These small Inclosures may be of several Dimensions; some of them three, four, six or eight Acres in Extent; but the larger Divisions for Corn should not contain less than twenty or thirty Acres, or more, according to the Size of the Farm.

The usual Method of Inclosing Land, is with a Ditch and Bank set with *Quick*. But in Marsh Land, where there is plenty of Water, they content themselves with only a Ditch, by the Sides of which they usually plant *Sal-lows* or *Poplars*, which being quick of Growth, in a few Years afford Shade to the Cattle; and when they are lopped, produce a considerable Profit to their Owners. In some Counties, the Division of their Lands is by dry Walls, made of flat Stones, laid regularly one upon another, and laying the top Course of Stones in Clay, to keep them together, the Weight of which secures the under ones. But in some Parts of *Sussex* and *Hampshire*, they often lay the Foundation of their Banks with flat Stones, which is of a considerable Breadth at Bottom: upon which they raise the Bank of Earth, and plant the Hedge on the Top, which in a few Years makes a strong durable Fence, especially if they are planted with *Holly*, as some of those in *Sussex* are.

In Marshes and open Pastures, where there are no Hedges, the Ditches are generally made six Feet wide at the Top, especially those which are on the Side of high Ways or Commons; but the common Ditches about Inclosures, are seldom more than three Feet and a half wide at Top, and one Foot and a half at Bottom, and two Feet deep; that the Sides may have a good Slope, and not be too upright, as they are frequently made about *London*, so that they are continually washing down with great Rains. In these narrow-bottomed Ditches, the Cattle cannot stand to turn themselves, so as to crop the *Quick*. But where the Ditches are made wider, they should be proportionally deeper: as for instance, if the Ditch is made five Feet broad, it must be three Feet deep; and if six Feet broad, three and a half Feet deep, and so in proportion.

The Method of Inclosing Lands, by raising high Banks of Earth, on the Side of which the *Quick* is planted, (as it is too much practised in many Places near *London*) is intolerable;

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for it is not only unsightly, but very expensive: for these Banks are continually washing down, so that they must be repaired every Year at least, if not oftener; otherwise the Earth will be in few Years washed from the Roots of the *Quick*, that for want of proper Nourishment, the Hedge will soon decay: which is the Case with the greatest Number of the Hedges about *London*. Beside, it is a very uncertain way of planting *Quick* on the Side of a steep Bank, where all the Moisture runs off; so that, if the Spring should prove dry, after it is planted, there is a great Hazard whether half the Plants will grow; and those that take, seldom make much Progress; whereas those planted on the plain Surface, where they enjoy the Advantages of Sun and Moisture, will in four Years make a better Fence, than one of these Bank Hedges will in eight Years, and will continue good much longer than the other. Therefore I should advise the Banks on which the Hedges are to be planted, not to be raised more than one Foot above the Surface of the Ground, where the Land is dry, and in wet Land not more than two Feet, which will be enough.

I shall now mention the most proper Plants for making of Fences for the different Soils and Situations, so as to answer the Expectation of the Planter: and first the *white Thorn* is esteemed the best for Fencing, and will grow upon almost any Soil, and in any Situation; but it succeeds best on a hazle Loam. Of this there are three or four Varieties, which differ in the Breadth of their Leaves, and the Size of their Haws; but that Sort with the smallest Leaves and Haws, will make the closest Fence. For it is very certain, that the Branches of all Sorts of Trees, are produced at a Distance in proportion to the Size of their Leaves; so that *Yews*, and other Evergreen Trees, with small Leaves will always make a closer Hedge, than other Trees, whose Leaves are larger. Therefore for the closest Hedge, the smallest Haws should be chosen; but where the most vigorous Shooters are required, for the Advantage of Lopping, there the largest Haws should be preferred. But as these Hedges are usually planted from a Nursery, where the Haws are promiscuously sown, so it is very common to see two or three Sorts, planted in the same Hedge, which may be easily distinguished, when they have obtained Strength, by the Difference of their Growth. Indeed, where a Person is curious in raising of his own *Quick*, it is worth while, to gather the Haws separately, and sow them apart, and each Sort should be planted in a separate Hedge, which will render the Hedges more equal in their Growth. If these Haws are sown in the Places where they are designed to remain for a Fence, they will make a much greater Progress in a few Years, than those which are transplanted; but as the Seeds remain a whole Year in the Ground, before the Plants appear, so few People care to practise this Method.

The next to the *white Thorn*, is the *black Thorn*, which tho' not so generally esteemed as

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the white, yet it will make an excellent Fence, where proper Care is taken in the Planting and After-management of it; and the Loppings of this Hedge make much the best Bushes, and are of longer Duration for Dead-hedges, than any other Sort; and are very proper to mend Gaps in Fences; for their Branches being beset with sharp long Thorns, the Cattle are not so apt to crop them as the white Thorn, and some other Sorts. These Hedges are also better, if the Stones are sown on the Spot where they are to remain, than where the Plants are taken from a Nursery.

The *Crab* will also make a strong durable Fence; this may be raised by sowing of the Kernels in the Place where the Hedge is designed; but then there should be great Care taken of the Plants while they are young, to keep them clear from Weeds, as also to guard them from Cattle. When these Stocks have obtained Strength, some of them may be grafted with Apples for Cyder, where the Fence is not exposed to a publick Road: but these Grafts should not be nearer than thirty-five or forty Feet, lest they spoil the Hedge, by their Heads overgrowing and dripping on it.

The *Holly* is also an excellent Plant for Evergreen Hedges, and would claim the Preference to either of the former, were it not for the Slowness of its Growth while young, and the Difficulty of transplanting of the Plants, when grown to a moderate Size. This will grow best on cold stony Lands, where if it once takes well, the Hedge may be rendered so close and thick, as to keep out all Sorts of Animals, and will grow to a great Height, and is of long Duration. These Hedges may be raised by sowing of the Berries, in the Place where they are designed to remain: but as they remain in the Ground an intire Year, before the Plants appear, so few Persons care to wait so long; therefore the usual Method is to plant the Hedges with Plants of three or four Years Growth; but where this is practised, they should not be transplanted till toward the End of *March*; and the Surface of the Ground should be covered with Mulch, near their Roots, after they are planted, to keep the Earth moist; and if the Season should prove dry, the Plants should be watered at least once a Week, until they have taken Root, otherwise they will be in Danger of miscarrying.

The *Alder* will also make a good Hedge, when planted on a moist Soil, or on the Side of Rivers or large Ditches; and will preserve the Bank from being washed away, where there are running Streams; for they spread pretty much at Bottom, and send forth Suckers from their Roots in great Plenty. But these Hedges should be shear'd at least once a Year, in order to make them thick. These Alder-hedges are very ornamental, when they are well kept, in large Gardens; and as they will thrive best on wet swampy Lands, where many other Plants will not live, so they should be selected for such Situations.

Of late Years the *Furze* has been much propagated for Hedges in several Parts of Eng-

land, and indeed will make a good Fence on poor sandy or gravelly Soils, where few other Plants will grow. The best Method of raising these Hedges is, to sow the Seed about the latter End of *March*, or the Beginning of *April*, in the Place where the Hedge is designed; for the Plants will not bear to be transplanted, unless it be done while they are young, and then there is great Hazard of their Taking. The Ground where the Seeds are to be sown, should be well cleansed of Weeds, and the Surface made light; then there should be two or three Drills made (according to the Width which the Hedge is intended) about half an Inch deep, into which the Seeds should be scattered pretty thick; and then the Drills should be filled up with the Head of a Rake, to cover the Seeds. This Work should be performed in dry Weather; for if much Wet falls soon after the Seeds are sown, it is apt to burst them. When the Plants are come up, they should be kept clear from Weeds, that the Plants may spread; and grow thick at Bottom; and if these Hedges are secured from Cattle browsing on them, and are cut every Spring, just before they begin to shoot, they will make an exceeding close Fence: but where they are designed to be cut for Fuel, then the best Way is to let them spread in Width; and when they are two Years old, to cut them down in the Spring, just before they begin to shoot, within two or three Inches of the Ground, which will cause them to send forth a Number of Shoots from each Root, and thereby increase the Width of the Hedge; and by so doing the Plants will not run up tall and weak, and be in Danger of being weighed down by great Falls of Snow. These Hedges, when they are well grown, may be cut down every third or fourth Year for Fuel, so if there is a treble Row of *Furze* sown, at about three Feet apart, they may be cut down alternately, so that there will be a Fence always remaining. But this is only recommended for such sandy Lands as let for a small Rent, and where Fuel is scarce. The best Sort of *Furze* for this Purpose is the greater Kind, commonly called the *French Furze*, which will grow to a great Height, and doth not spread so much as the ordinary small Sort.

Elder is sometimes planted for Hedges, being very quick of Growth; so that if Sticks or Truncheons, about four or five Feet long, be thrust into a Bank slope-wise each Way, so as to cross each other, and thereby form a sort of Chequer-work, it will make a Fence for Shelter in one Year. But as this is a vigorous growing Plant, so it will never form a close Fence; and the young Shoots, being very soft and pithy, are soon broken by Cattle, or unlucky Boys. Besides, where they are suffered to bear Berries, and these are scattered over the neighbouring Land, they will come up the following Spring, and become very troublesome. Where these Hedges are planted, they may be cut down every third Year, near the Ground; and these Stakes (when divested of their Bark, so as to prevent their Growing) will last longer in the Ground, to support Vines,

Vines, or any other Plants, which do not require tall Stakes, than any other Sort of Tree yet known. And where the Trees are suffered to grow to any considerable Size, the Wood is as hard as Box; so is very useful for Turners and Instrument-makers. The best Season for planting of these Trunchcons is soon after *Michaelmas*, because these Plants shoot very early in the Spring. Of late Years, there have been many Hedges, and other Plantations, made of the white-berried *Elder*, for the Sake of their Fruit to make Wine; which if rightly made, hath the Flavour of *Frontinac* Wine, and is by some Persons vended for it.

There are some other Plants, which have been recommended for Fences; but those here enumerated are the only useful Sorts for such Purposes; so I shall pass over the others, as not worthy of the Care of the Husbandman. And as to the farther Direction for Planting, and preserving of Hedges, with Instructions for plashing or laying them, the Reader is desired to turn to the Articles of *Fences* and *Hedges* in the former Volume of the *Gardeners Dictionary*, where there are particular Directions for these Works exhibited; so I shall not repeat them here.

The Draining of Land, is also another great Improvement to it; for tho' Meadows and Pastures, which are capable of being overflowed, produce a greater Quantity of Herbage than dry Land; yet where the Wet lies too long upon the Ground, the Grass will be sour, and extremely coarse. And where there is not Care taken in time to drain this Land, it will produce little Grass, and soon be over-run with Rushes and Flags, so as to be of little Value. The Land which is most liable to this, is cold stiff Clays, where the Water cannot penetrate, but is contained as in a Dish; so that the Wet which it receives in Winter, continues till the Heat of the Sun exhales the greatest Part of it.

The best Method for Draining of these Lands, is, to cut several Drains across the Land, in those Places where the Water is subject to lodge; and from these cross Drains, to make a convenient Number of other Drains, to carry off the Water to either Ponds or Rivers, in the lower Parts of the Land. These Drains need not be made very large, unless the Ground be very low, and so situated as not to be near any River, to which the Water may be conveyed: in which case there should be large Ditches dug at proper Distances, to contain the Water; and the Earth which comes out of the Ditches, should be equally spread on the Land, to raise the Surface. But where the Water can be conveniently carried off, the best Method is to make under-ground Drains, at proper Distances, which may empty themselves into large Ditches, which are designed to carry off the Water. These sort of Drains are the most convenient, and as they are hid from the Sight, do not incommode the Land, nor is there any Ground lost, where these are made.

The usual Method of making these Drains, is to dig Trenches, and fill their Bottoms with

Stones, Bricks, Rushes or Bushes, which are covered over with the Earth, which was dug out of the Trenches: but this is not the best Method, because the Water has not a free Passage thro' the Drains, so that whenever there is a Flood, these Drains are often stopp'd by the Soil which the Water frequently brings down with it. The best Method I have yet observed to make these Drains, is, to dig Trenches to a proper Depth for carrying off the Water, which should be three Feet wide at their Tops, and sloped down to about a Foot wide at their Bottom; then having prepared a Quantity of good Brush-wood, the larger Sticks should be cut out to Pieces of about sixteen or eighteen Inches in Length, which should be laid across the lower Part of the Drain, at about fourteen Inches Distance, so as to leave about a Foot of the lower Part of the Drain open, thro' which the Water is to Pass; then cover these Sticks with the smaller Brush-wood, Furze, Broom, or any other Kind of Brush, laying it lengthwise pretty close; on the Top of these may be laid Rushes, Flags, &c. and then the Earth laid on to cover the Whole. These sort of Drains will continue good for a great Number of Years, and are never liable to the Inconveniences of the other Drains; for the Water will find an easy Passage thro' them, and where there is plenty of Brush-wood, they are made at an easy Expence; but in such Places where Wood is scarce, it would be chargeable to make them. However in this Case, it would be a great Advantage to these Lands, to plant a sufficient Number of Cuttings of Willow, or the black Poplar, on some of the moist Places, which would furnish Brush-wood for these Purposes in four or five Years; and as the Expence of planting these Cuttings is trifling, so there cannot be a greater Advantage to an Estate which wants Draining, than to practise this Method, which is in every Person's Power, since there is little Expence attending of it.

The best Time of the Year for making of these Drains, is about *Michaelmas*, before the heavy Rains of Autumn fall; because at this Season, the Land is usually dry, so that the Drains may be dug to a proper Depth. For when the Ground is wet, it will be very difficult to dig to any Depth, because the Water will drain in, where-ever there is an Opening in the Ground.

When these Drains are made, and the Water carried off the Land, it will be proper to pare off all the Rushes, Flags, &c. Which may be laid in Heaps in proper Places to rot, and will afford a good Manure for the Land. The Ground must also be ploughed, to destroy the Roots of noxious Weeds; and if it be laid fallow for one Season, and ploughed two or three times, it will greatly mend the Land. The Rushes and Flags, which were pared off the Ground, when rotten, should be spread over the Surface, and the Grass-seed sown thereon, which will greatly forward the Grass, so that it may soon be brought to a good Turf; which Land thus mended, has been let for four times the Rent, it was set at before.

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There are some Persons, who, after they have pared off the Flags, Rushes, &c. from their Land, lay them in small Heaps, and burn them in dry Weather, then spread the Ashes on the Land to improve it; which is a good Method, where a Person is in Haste to have Grass again; but where the Ground can be fallowed one Year, it will loosen the Soil, and more effectually destroy the Roots of all noxious Weeds; and the Rushes, &c. when rotted, will afford a much larger Quantity of Manure for the Land, than when it is burnt: besides this can only be practised in the summer Season, when the Weather is very dry; for if there should fall much Rain, the Fires will go out, and it will be impracticable to burn it. But where the Method of Burning is practised, the Heaps should not be too great, and it should burn very slowly; which will render the Ashes a much better Manure, than where the Fire is too violent, or the Heaps too large; for in this Case, the Inner-part will be over-burnt, before the Fire reaches the Outside of the Heap.

As the Draining of cold wet Lands is a great Improvement to them, so the Floating or Watering of dry loose Lands is not a less Advantage to them. This may be effected easily, where there are Rivers, or Reservoirs of Water, which are situated above the Level of the Ground designed to be floated, by underground Drains, (made after the Manner of those before directed for Draining of Land) thro' which the Water may be conveyed at proper Seasons, and let out on the Ground; in order to this, there must be good Sluices made at the Heads of the Drains, so that the Water may never get out, but at such times as it is required; for if this be not taken care of, the Water, instead of improving the Land, will greatly damage it.

But where the Land lies so high, as that there is no Water in the Neighbourhood lying above its Level, it will be more expensive, because in such Case the Water must be raised by Machines, from Reservoirs or Streams which lie below it. The most common Engine used for this Purpose, is the *Persian Wheel* (which being well described, and figured in *Woolridge's Art of Husbandry*, is needless for me to repeat here). Yet notwithstanding the Expence of raising the Water, it has been found greatly advantageous in many Parts of *England*, to drown the Lands; for the Profit has many times more than doubled the Charge.

The Times for drowning of Land are after the Grass is close fed, from the Middle or latter End of *November*, till the End of *April*; but it is done to most Advantage in the Spring, especially if the Season proves dry. Where the Land is very hot and dry, and it lieth convenient to be watered at a small Expence; it should be repeated every Week in dry hot Weather, which will prove a great Advantage to the Land. But whenever this is done, there should no Cattle be admitted while it is wet; for they will poach, and spoil the Turf.

Another great Improvement of Land is by Burning of it, which for sour, heathy, and *Rusby-Land*, be it either hot or cold, wet or dry, is a very great Improvement; so that such Lands will in two or three Years after Burning, yield more, exclusive of the Charges, than the Inheritance was worth before. But this is not to be practised on rich fertile Land; for as the Fire destroys the acid Juice, which occasions Sterility in the poor Land, so it also will consume the good Juices of the richer Land, and thereby impoverish it; so that it hath been with great Reason disused in deep rich Countries.

The usual Method of Burning Land, is to pare off the Turf with a breast Plough, turning of it over as it is cut, that it may dry the better. And if it prove hot dry Weather, when this Work is done, then it needs no more Turning; but if Rain should fall, it must be turned, and the Turfs set a little hollow, that they may dry the better; and when they are thorough-dry, they may be laid on small Heaps, about half a Cart-load on a Heap, or less; for the smaller the Heaps are, provided there is Quantity enough to make a good Fire, so as to consume the Whole to Ashes, it is the better: if the Turf be full of fibrous Roots, or hath much Moss or Fern on it, it will burn without any additional Fuel; but if it hath not, the Heaps should be raised on small Bundles of Heath, Fern, Gorze, &c. which will set the Whole on Fire; but there should be no more of these things applied, than what is necessary to kindle the Fire, because the slower the Turf consumes, the better will be the Ashes. When the Turf is wholly consumed, the Ashes should be equally scattered over the Ground in a calm Day, lest the Wind should drive it in Heaps. Then the Land should be gently ploughed, and the Seeds sown thereon; for if the Ground is plough'd too deep, the Ashes will be buried too low for the Roots of the Grass or Corn to reach them, for a considerable Time; nor should the Ashes lie too near the Surface, because then the Roots will reach them too soon, and the Strength of the Ashes will be spent to nourish only the Blade; so that the Corn will grow too rank in Winter, and when the Roots in the Spring strike down lower, they will meet with a poorer Soil, so that the Stalks and Ears will not have so much Advantage from the Improvement, as the useless Blade. But where Care is taken in this Particular, it is wonderful what Success it hath: for by this Method, the poorest Plains, and sour heathy Lands, have been rendered as fertile, as almost any good cultivated Ground whatever.

It is also a very great Improvement, where Land is over grown with *Broom*, *Furze*, &c. to stub them up by their Roots; and when they are dry, lay them on Heaps, and cover them with the Parings of the Earth, and burn them, and spread the Ashes over the Ground. By this Method vast Tracts of Land, which at present produce little or nothing to their Owners,

Owners, might be made good for a small Expence, so as to become good Estates to the Proprietors.

The several other Improvements of Land by Dinging, will be exhibited under the Article *Manure*. And as to the Improvement of Land, by sowing of Grasses, &c. that is mentioned under the several Articles, where the Plants are treated of; as the different Kinds of Clover or Trefoil under *Trifolium*, the St. Foy under *Onobrychis*, Lucern under *Medica*, Ray Grass under *Gramen*, Spurry under *Spergula*, to which Articles the Reader is desired to turn.

LAPATHUM, Dock.

In the former Volume there are only three Species of this Genus enumerated, (*viz.*) The Pontic Rhubarb, the Bastard Monks Rhubarb, and the Patience: but as there are several other Species, some of which are used in Medicine, so I shall enumerate them in this Place.

1. LAPATHUM folio acuto plano. C. B. P. Sharp-pointed Dock.
2. LAPATHUM folio acuto crispo. C. B. P. Curled sharp-pointed Dock.
3. LAPATHUM folio acuto rubente. C. B. P. Bloodwort or sharp-pointed Dock, with red Veins and Footstalks to the Leaves.
4. LAPATHUM folio acuto, flore aureo. C. B. P. Sharp-pointed Dock, with golden Flowers.
5. LAPATHUM acutum minimum. J. B. The least sharp-pointed Dock.
6. LAPATHUM vulgare, folio obtuso. J. B. Common broad-leaved Dock, vulgarly called the Butter Dock.
7. LAPATHUM sylvestre, folio subrotundo, seminis involucris dentatis nobis. Mor. Hist. Common Broad-leaved Dock, with indented Covers to the Seeds.
8. LAPATHUM aquaticum, folio cubitali. C. B. P. Great Water Dock.
9. LAPATHUM aquaticum minus. C. B. P. Lesser Water Dock.
10. LAPATHUM pulchrum Bononiense sinuatum. J. B. The Fiddle Dock.
11. LAPATHUM bortense latifolium. C. B. P. The true Monks Rhubarb.
12. LAPATHUM Chalepense, folio acuto, seminum involucris profunde dentatis. Mor. Hist. Sharp-pointed Aleppo Dock, with the Seed-covers deeply indented.
13. LAPATHUM Egyptiacum annuum, parietariae folio, capsula seminis longius barbata. Hort. Pis. Annual Egyptian Dock, with a pellitory Leaf, and long Beards to the Seed-vessels.
14. LAPATHUM Orientale, folio latissimo undulato & mucronato, sive Rhubarbarum verum. The true Rhubarb.

The ten first-mentioned Sorts grow wild in many Parts of England, and are seldom admitted into Gardens; but as several of these are used in Medicine, so I have put down the Names by which they are distinguished amongst the Botanists. The first and third Sorts are directed by the College of Physicians, to be used in Medicine; but the People who supply the Markets, take the Roots of all the Sorts promiscuously as they find them. These two

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Sorts grow near Hedges, and in shady Lanes, which are not much frequented, in most Parts of England; but the third Sort is less common than the first, from which it differs in nothing but the Stalks and the Veins of the Leaves being red.

The Roots of the eighth Sort are also used in Medicine; this is the Plant which *Muntingius*, a curious Botanist of Groningen in Holland, supposes to be the *Herba Britannica* of the Antients, which was found to be a sovereign Remedy for the Scurvy. This Sort grows frequently in standing Waters, where it produces Leaves two and a half or three Feet in Length. When this Sort is planted on dry Land, or the Water drained off the Ground, where it naturally grows, it will not rise to near the Size of those Plants which grow in deep Waters.

The eleventh Sort, whose Roots are used in Medicine, and is the true Monks Rhubarb, is not common in England; so that those who use Roots of English Growth, are supplied with the Patience Dock, or the round-leaved Alpine Dock, both which Sorts are cultivated in the English Gardens.

The twelfth and thirteenth Sorts are Foreigners, which have been introduced by the Curious in Botany for the sake of Variety; but they are not used in Medicine, and as they are Plants of no great Beauty, so they do not merit a Place unless in Botanic Gardens, for the sake of Variety. The twelfth Sort will continue two or three Years, but the thirteenth Sort is an annual Plant.

The Seeds of the fourteenth Sort I received for the true Rhubarb: these were gathered by a Gentleman who was on the Spot, where the Roots are taken up, and sent to *Petersburgh* in Muscovy, for the Supply of Europe; so that there is no great Reason to doubt of its being the true Kind. This Sort is extremely hardy; for the Seeds were sown in the full Ground, where the Plants came up, and have remained, without any other Care but to keep them clear from Weeds: so that, when we can obtain Seeds from these Plants, it may be sown for Use, since it appears to be equally hardy with our common Docks, and there is little Reason to fear that it may be equal in Goodness to the Foreign Rhubarb.

All the Sorts of Dock are propagated by Seeds, which should be sown in Autumn, soon after they are ripe; for when the Seeds are kept out of the Ground until Spring, they will remain a whole Year in the Ground before the Plants appear; whereas those sown in Autumn, will come up the following Spring. Where the Seeds of the true Rhubarb (or any of the other Sorts, whose Roots are used in Medicine) are sown to propagate the Plants, they should have a Soil rather moist than dry, and of a pretty good Depth, that the Roots may have room to run down. The Seeds should be sown thin; and in the Spring, when the Plants come up, they should be houghed out, after the manner directed for Parsnips and Carrots, leaving the large growing Kinds (as the true Rhubarb, Rhapontic, and

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Alpine round-leaved Dock) two Feet and a half asunder at least, because these produce very large spreading Leaves, and if they have not sufficient room to grow, the Roots will be small. When this is done, the Plants will require no other Management, but to keep them clear from Weeds; and in two or three Years Time the Roots will be fit for Use, when they should be taken up soon after their Leaves decay in Autumn. But it will be well worth trying, whether those Plants whose Flower-stems are pinched off, soon after they appear in Spring, (so are never suffered to flower or seed) do not produce better Roots, than those which are permitted to seed, because we find most other Roots grow sticky and tough after they have seeded, and are not near so good for Use as before; and as these Plants frequently send out Flower-stems the second Year, so it may be necessary to prevent their Growth in order to encourage their Roots.

LARIX, The Larch Tree.

There is a particular Sort of this Tree, which was brought from *America*, which is growing in the Garden of Mr. Peter Collinson at *Peckham* in *Surry*, which differs from the *European* Kind, in having darker Shoots. This Kind I do not find mentioned by the Botanists, nor has it been long known in *Europe*, tho' it grows plentifully in some of the Northern Parts of *America*. This doth not promise to make so large Trees as the *European* Kind, so should be planted with Trees of lower Growth to form Clumps and Amphitheatres, where it will make a Variety in Summer, when its green Leaves appear. It may be propagated by Seeds, after the same Manner as hath been directed for the *European* Kind, in the Former Volume of the *Gardeners Dictionary*; and being a Native of cold Countries, will endure the severest Cold of this Climate.

LATHYRUS, Chichling Vetch.

The Species omitted in the former Volume are:

1. LATHYRUS *sativus*, flore fructuque albo. C. B. P. Garden Chichling Vetch, with white Flowers and Fruit.
2. LATHYRUS *sativus*, flore purpureo. C. B. P. Garden Chichling Vetch, with a purple Flower.
3. LATHYRUS *sylvestris major*. C. B. P. Great wild Chichling Vetch.
4. LATHYRUS *sylvestris major*, flore atro purpureo. Inst. R. H. Great wild Chichling Vetch, with a dark purple Flower.
5. LATHYRUS *latifolius*, flore albo. Inst. R. H. Everlasting Pea, with a white Flower.
6. LATHYRUS *angustifolius*, semine maculoso. C. B. P. Narrow-leaved Chichling Vetch, with a spotted Seed.
7. LATHYRUS *angustissimo folio*, Americanus variegatus. C. B. P. The most narrow-leaved American Chichling Vetch, with a variegated Flower.
8. LATHYRUS *annuus*, flore caeruleo, ochri filiqua. H. L. B. Annual Chichling Vetch, with a blue Flower, and a Pod shaped like Ochrus.

9. LATHYRUS *Boticus*, flore luteo. Park. Theat. Spanish Chichling Vetch, with a yellow Flower.

10. LATHYRUS *luteus latifolius*. Bot. Monsp. Broad-leaved yellow Chichling Vetch.

11. LATHYRUS *angustifolius*, filiqua hirsuta. C. B. P. Narrow-leaved Chichling Vetch, with a hairy Pod.

12. LATHYRUS *latifolius annuus*, filiqua articulata hirsutior. H. R. Par. Broad-leaved annual Chichling Vetch, with a very rough jointed Pod.

13. LATHYRUS *angustissimo folio*, semine rotundo. H. R. Par. Narrow-leaved Chichling Vetch, with a round Seed.

14. LATHYRUS *angustissimo folio*, semine anguloso. H. R. Par. Narrow-leaved Chichling Vetch, with an angular Seed.

The first Sort here mentioned is frequently cultivated for Use in several Parts of *Europe*; but in *England* it is rarely to be met with, unless it be in Botanic Gardens, where it is preserved for the sake of Variety. This Plant may be cultivated in the same Manner as *Tares*, and may be used for the same Purposes; but the best Method is to sow them in Drills about eighteen Inches asunder, and so keep the Ground houghed with a Plough to destroy the Weeds between the Rows, in the same Manner as is practised for Peas; by which Method the Plants will thrive exceedingly, and become a great Improvement to poor sandy Land.

The second Sort is a Variety of the first, from which it only differs in the Colour of the Flower, this having a fine purple Flower, and is by many Persons sowed in Gardens by way of Ornament. If the Seeds of this Sort are sowed in Autumn, the Plants will come up, and abide the Winter very well; so will flower the following May; but if the Seeds are sown in the Spring, the Plants will not flower till July or August: so that by sowing at the two different Seasons, these may be continued in Beauty for several Months.

The third Sort has been by some Persons sown for Feed for Cattle; but it doth not answer near so well for this Purpose as the first Sort, so is not worth Cultivating. The fourth Sort is a Variety of the first, from which it differs in the Colour of the Flower; so is preserved by the Curious in Botany, for the sake of Variety.

The fifth Sort is a Variety of the common *Everlasting Pea*; the Flowers of this being white, are preserved by several Persons for the Variety; but it is not so beautiful as the common Sort. This may be propagated in the same Manner as is directed for the common Sort, in the first Volume of the *Gardeners Dictionary*.

The nine following Sorts are preserved in some curious Gardens, for the Variety of their Flowers. These may all of them be propagated by sowing of their Seeds, either in Spring or Autumn; but those which are sowed in Autumn, should have a light Soil, and a warm Situation, where the Plants will abide the Winter, and come to flower early the following Spring,

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Spring, and their Seeds will ripen in *July*. But those which are sown in the Spring, should have an open Exposure, and may be planted upon almost any Soil; for they are not very tender Plants in their Culture. These Sorts should all of them be sown where they are designed to remain, for they seldom succeed when they are transplanted; so that where they are sown for Ornament, there should be six or eight Seeds sown in a small Patch, in different Parts of the Borders of the Flower-garden; and when the Plants come up, they should be carefully kept clear from Weeds; and when they are grown two or three Inches high, there should be some Sticks put down by them to support them; otherwise they will trail on the Ground, and become unfightly; besides, they will trail on whatever Plants grow near them.

The sixth and the fourteenth Sorts, I have seen cultivated in some Kitchen-gardens for the Table, and are by the People in some Parts of *Germany* constantly eaten as Peas; but as they are not near so tender or well-tasted as Peas, so I believe few Persons in *England* will ever cultivate them for that Purpose.

LAVENDULA, Lavender.

The *Species* omitted in the former Volume are:

1. *LAVENDULA latifolia Indica subcinerea, spica brevior.* H. R. Par. Broad-leaved Indian Lavender, with a short Spike.

2. *LAVENDULA latifolia Hispanica tomentosa.* Inst. R. H. Broad-leaved woolly Spanish Lavender.

3. *LAVENDULA latifolia, flore albo.* C. B. P. Broad-leaved Lavender, with a white Flower.

These Sorts are distinguished by most Writers in Botany; but I believe the first Sort here mentioned to be the same with the broad-leaved barren Lavender, mentioned in the former Volume of the *Gardeners Dictionary*, which is a Degeneracy from the common Sort; for by planting Slips or Cuttings of this Sort, they will often alter, and become narrow-leaved, when the Plants will produce Flowers in as great Plenty as the common Sort, tho', while they continue to have broad Leaves, they do not produce any Flowers.

The second Sort is not common in *England*; this was found by Doctor *Tournefort* in *Spain*. The third Sort is a Variety of the common broad-leaved Kind, from which it only differs in the Colour of the Flower.

These may all be propagated by Slips or Cuttings, which should be planted in the Spring, just before the Plants begin to shoot; which if kept watered in dry Weather, will soon take Root, and most of them will produce Flowers the same Year. They are very hardy in respect to Cold, provided they have dry hungry Soil, in which they will abide many Years, and become woody.

LAURUS, The Bay-tree.

To this Article must be added:

1. *LAURUS Americana mas, foliis subrotundis, floribus in capitulum collectis.* Houst. Male

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American Bay, with roundish Leaves, and Flowers collected in a Head.

2. *LAURUS Americana femina, foliis subrotundis, fructu albo umbellato.* Houst. Female *American Bay*, with roundish Leaves, and white Fruit growing in an Umbel.

These two Sorts were discovered by the late Doctor *William Houstoun*, at *La Vera Cruz*; from whence he sent the Seeds into *Europe*, which have furnished some curious Gardens with the Plants. These being Natives of a warm Country, must be preserved in Stoves; otherwise they will not live thro' the Winter in this Climate, especially while they are young; but when they have been raised to have Strength, they may be kept in a warm Green-house, without any Fire. During the summer Months, they may be placed in the open Air, in a warm sheltered Situation; but they should not remain too long abroad in Autumn, for if the Frost should pinch them, they will soon decay. In warm Weather, these Plants must be frequently watered; but in Winter they should have it more sparingly, unless they are kept warm, when they will require a greater Share. As these Plants retain their Leaves in Winter, so they make an agreeable Variety amongst other Exotic Plants in the Stove. They may be propagated by Layers, when the Plants are strong enough to send forth good Shoots; for as they do not produce Seeds in this Country, so it will be difficult to obtain them from Abroad. The best Time to lay down the Shoots, is in *April*, when you should give them a Hot-bed, which will greatly forward their making of Roots, especially if they are duly watered. But they will not have Roots enough to transplant before the next Spring.

LEPIDIUM, Dittander or Pepperwort.

The Characters are:

The Flower consists of four Leaves, which are placed in form of a Cross, from whose Cup arises the Pistillum, which afterward becomes a spear-shaped Fruit, which is divided in the middle by a Partition into two Cells, which contain many oblong Seeds.

The Species are:

1. *LEPIDIUM latifolium.* C. B. P. Common broad-leaved Dittander, or Poor-man's Pepper.

2. *LEPIDIUM humile incanum arvense.* Inst. R. H. Low hoary Dittander, or Pepperwort.

3. *LEPIDIUM gramineo folio, sive Iberis.* Inst. R. H. Grass-leaved Dittander, or Sciatica Cress.

4. *LEPIDIUM humile, minus incanum, Alepicum.* Inst. R. H. Low greener Dittander of Aleppo.

5. *LEPIDIUM capillaceo folio, fruticosum Hispanicum.* Inst. R. H. Shrubby Spanish Dittander, with very narrow Leaves.

6. *LEPIDIUM Orientale, nasturtii crispi folio.* Tourn. Cor. Eastern Dittander, with a curled cress Leaf.

7. *LEPIDIUM Orientale, nasturtii folio, caule vesicario.* Tourn. Cor. Eastern Dittander, with a cress Leaf, and a swelling Stalk.

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8. *LEPIDIUM orientale, caryophylli folio.* Tourn. Cor. Eastern Dittander, with a clove-gilly-flower Leaf.

The first and third Sorts are directed by the College of Physicians to be used in Medicine. The first grows wild in some Parts of England, but is generally cultivated in Gardens for Use. The Herb and Root of this Sort were formerly used in Sauce, to give a warm biting Taste thereto; and some poor People have mixed a few of the Leaves in their Sallets, for the same Purpose. This Sort is easily propagated, by planting any small Pieces of the Root, either in Spring or Autumn, after the Manner directed for *Horfe Radish*; but it should be placed in some odd Corner of the Garden, and not near other Plants, because the Roots will spread and shoot up at a great Distance, so as to over-run the Ground where it is planted.

The third Sort may be propagated by Seeds, which should be sown in the Spring; and when the Plants are come up, they should be thinned, so as to leave them eight or ten Inches asunder, and keep them clear from Weeds; which is all the Culture they require. The second Year the Plants will produce Seeds, and the old Roots will remain several Years, provided they are not in too rich Ground. The Leaves and Seeds of this Plant are used in Medicine.

The second and fourth Sorts are trailing Plants, which propagate very fast by their creeping Roots: these are preserved in Botanic Gardens for Variety, but there is little Beauty in them.

The fifth Sort was discovered by Doctor Tournesfort in Spain. This grows shrubby, and will abide the Cold of our ordinary Winters in the open Air, provided it is planted on a poor dry Soil. It may be propagated either by Seeds or Cuttings.

The other three Sorts were discovered by Doctor Tournesfort in the *Levant*, from whence he sent their Seeds to the Royal Garden at Paris. These are also preserved in Botanic Gardens for the sake of Variety, and may be easily propagated by Seeds.

LEPIDOCARPODENDRON.

We have no English Name for this Genus.

The Characters are;

It hath a large scaly Flower-cup, in which are included many Florets, some of which are apetalous, and appear like Hairs, and other are hermaphrodite; from the middle of the Flowers arises the Ovary, which is inclosed in a Sheath; the Seeds have long Plumes like Feathers adbering to them.

The Species are;

1. *LEPIDOCARPODENDRON folio saligno lato, caule purpurascete.* Boerb. Lepidocarpodendron with a broad willow Leaf, and a purplish Stalk.

2. *LEPIDOCARPODENDRON foliis angustis longis salignis, nervo rubro, florum plumis violaceo-purpureis.* Boerb. Lepidocarpodendron with long narrow willow Leaves, having a

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red Vein, and the Plumes of the Flowers of a violet-purple Colour.

3. *LEPIDOCARPODENDRON foliis angustissimis gramineis, fructu cancellato, semine coronato.* Boerb. Lepidocarpodendron with very narrow grass Leaves, a hooded Fruit, and a crowned Seed.

There are several other Sorts of these Trees, which naturally grow in the Country near the *Cape of Good Hope*, from whence those here mentioned were brought into the European Gardens; where they are preserved by the Curious to add to the Variety in the Green-house.

These Plants may be propagated in the same Manner as hath been directed for *Conocarpodendron*, and the Plants may also be treated as those; so it will be needless to repeat it in this Place.

LEUCANTHEMUM, Ox-eye Daizy.

The Species omitted in the former Volume are;

1. *LEUCANTHEMUM montanum, foliis chrysanthemi.* Inst. R. H. Mountain Ox-eye Daizy, with corn-marygold Leaves.

2. *LEUCANTHEMUM gramineo folio.* Inst. R. H. Grass-leaved Ox-eye Daizy.

3. *LEUCANTHEMUM latissimo folio, flore maximo.* Inst. R. H. Broadest-leaved Ox-eye Daizy, with a large Flower.

4. *LEUCANTHEMUM Lusitanicum, argenteo laciniato folio.* Inst. R. H. Portugal Ox-Eye Daizy, with a silver jagged Leaf.

5. *LEUCANTHEMUM Americanum frutescens, foliis latis conjugatis & asperis, flore albo, capitulis squamosis.* Houst. Shrubby American Ox-eye Daizy, with broad rough Leaves growing opposite, a white Flower, and a scaly Cup.

The four first-mentioned Sorts are hardy Plants, which will live in the open Air in England: they may be propagated by sowing of their Seeds on a Bed of light fresh Earth, in the Beginning of March; and when the Plants begin to appear, they should be carefully clear'd from Weeds, and in very dry Weather they should be refreshed with Water, which will greatly promote their Growth. When they are about two Inches high, they should be transplanted into Beds, at about eight Inches Distance, observing to water them until they have taken new Root; after which Time they will require no other Care, but to keep them clear from Weeds, till the Autumn following, when they should be transplanted into the large Borders of the Pleasure-garden, where they are designed to remain: in which Places they will afford an agreeable Variety, when intermixed with other hardy flowering Plants, and will abide a long time.

The fifth Sort was discovered by the late Doctor William Houstoun at Campechy, from whence he sent the Seeds into Europe, whereby many Gardens have been stored with this Plant. This Sort being a Native of a warm Country, will not live in this Climate, unless it is placed in a Stove in the Winter: but in the

the middle of Summer, it will abide the open Air in a warm Situation, and will thrive better at that Season Abroad, than if it were kept in the Stove; because the Leaves of this Plant are very subject to contract Filth, and Insects lodge upon them, whereby the Plants are rendered unsightly, and seldom thrive. This Sort may be propagated by Cuttings during the Summer Months, which should be planted in Pots filled with fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them until they have taken Root, and give them plenty of Water: and when the Cuttings are rooted, they should be placed in the open Air in a warm Situation, where they may remain until the latter End of September, when they should be removed into the Stove; observing to let them have a large Share of fresh Air in the Day-time, while the Weather continues moderate; but as the Cold increaseth, so they should be secured therefrom. These Plants require but a moderate Warmth in Winter, so should be placed with the more hardy Stove-plants, and will require to be often refreshed with Water. With this Management, the Plants will grow 8 or 10 Feet high, and add to the Variety in the Stove.

LICHEN, Liverwort.

There being two Sorts of this Plant, which are used in Medicine, and one of those being accounted a sovereign Remedy for the Bite of Mad-dogs, so I thought it would not be improper to mention them here, tho' they are Plants which cannot be propagated by any Method, except by paring up the Turf of Grass whereon they grow, and laying it down in some moist shady Place, where, if the Turf takes Root and thrives, these Plants will spread and do well. The two Sorts are;

1. LICHEN *petraeus latifolius*, five *Hepatica fontana*. C. B. P. Common broad-leav'd Liverwort.

2. LICHEN *terrestris cinereus*. Raii Syn. Ash-coloured ground Liverwort.

The first Sort grows on the Sides of Wells, and in moist shady Places, not only on the Ground, but on Stones, Bricks or Wood. Of this there are several Varieties, which are distinguished by the Curious in Botany; but as they are Plants of no Use, so I shall not enumerate them here.

The second Sort (which is used to cure the Bite of Mad-dogs) grows on Commons and open Heaths, where the Grass is short, in most Parts of England, especially on Declivities, and on the Sides of Pits. This spreads on the Surface of the Ground, and when in Perfection, is of an Ash-colour; but as it grows old, it alters, and becomes of a Dark-colour. This is often carried into Gardens with the Turf which is laid for Walks and Slopes; and where the Soil is moist and cool, it will spread, and be difficult to destroy; so that it renders the Grass unsightly: but this is the only Method yet known to have it grow in Gardens, where it is desired.

This is esteemed a sovereign Remedy for the Bite of Mad-dogs, and hath been for many

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Years used with great Success. It was communicated to the Royal Society, by Mr. George Dampier, whose Uncle had long used this Plant, to cure the Bite of Mad-dogs, on Men and Animals, with infallible Success; the Method of taking it he has delivered as followeth: Take of the Herb, and dry it either in an Oven, by the Fire, or in the Sun; then powder it, and pass it thro' a fine Sieve; mix this with an equal Quantity of fine powdered Pepper; the common Dose of this Mixture is four Scruples, which may be taken in warm Milk, Beer, Ale, or Broth. He also adviseth the Part bitten to be well washed, as also the Cloaths of the Person who is bit, lest any of the Snivel or Drivel of the Mad-dog, should remain. If the Person bitten be full-grown, he adviseth that he be blooded, before the Medicine is taken; and to use the Remedy as soon after the Bite as possible, as also to repeat the Dose two or three several Mornings fasting.

LIGUSTRUM, Privet.

The Species omitted in the former Volume are;

1. LIGUSTRUM *Capense sempervirens*, folio crasso subrotundo. Hort. Elth. Evergreen Privet of the Cape of Good Hope, with a thick roundish Leaf.

2. LIGUSTRUM *Aegyptiacum*, Albenna vel Alcanna Arabum. Jess. Egyptian Privet, called Albenna or Alcanna by the Arabians.

3. LIGUSTROIDES, quod *Ligustrum Americanum aculeatum*, fructu testiculato. Plum. Prickly American Privet, with testiculated Fruit.

The first Sort is a Native of the Cape of Good Hope, from whence it was brought into the Gardens in Holland, where it hath been propagated and communicated to several Parts of Europe. This Plant is pretty hardy, so may be preserved in a common Green-house, with Oranges, Myrtles, &c. Where it will make an agreeable Variety. It may be propagated by laying down the tender Shoots, which will take Root in one Year, and may then be transplanted into small Pots filled with fresh light Earth, observing to water and shade them until they have taken new Root; after which Time, they may be treated in the same Manner as Myrtles, or any other hardy Exotic Plant, which requires to be housed in Winter.

The second Sort grows plentifully in Egypt, and some other Places in the East, from whence the Seeds have been sent to Europe, and many of the Plants have been raised, which proved so tender, that few of them have been preserved. The Leaves of this Tree dried and powdered, are a great Merchandise throughout the Turkish Empire, and the neighbouring Countries, where it is used to dye the Hair and Nails of the Inhabitants of a yellow Colour.

This Sort may be propagated by Seeds, which should be sown early in the Spring on a Hot-bed; and when the Plants are come up, they should be transplanted into separate small Pots filled with fresh rich Earth, and plunged into a Hot-bed of Tanners-bark, where they must be treated after the same Manner as the young Coffee-Trees, and must be constantly

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preserved in the Stove; for they are too tender to thrive in the open Air in this Climate, even in the warmest Season of the Year.

The third Sort was discovered by Father Plumier in *America*; the Seeds of this Plant were sent into *England* by the late Dr. William Houstoun, who gathered them at *Campechy*. This Sort is tender, and requires to be preserved in Stoves, during the winter Season; otherwise it will not live in this Country.

This Sort will grow to the Height of ten or twelve Feet in this Country, and is more hardy than the former; so will thrive in the open Air during the Summer-months, provided it is placed in a warm Situation; and in Winter it may be placed in a Stove with Plants, which require only a moderate Warmth to preserve them. This Plant must be frequently watered; for it grows naturally on moist swampy Soils, near the Sea. These may be both propagated by laying down their Branches in the Spring, which if duly watered, will be rooted by the next Spring, when they may be taken off, and transplanted into Pots filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, which will greatly promote their taking new Root; but they must be watered and shaded, until they are rooted; then they may be treated in the same manner as the old Plants.

LILIO-ASPHODELUS, Lily-Asphodel.

To this Article must be added;

1. LILIO-ASPHODELUS *Americanus semper-virens maximus polyanthos albus*. Hort. Elth. Greatest ever-green American Asphodel-lily, with many white Flowers.

2. LILIO-ASPHODELUS *luteus minor*. Inst. R. H. The lesser yellow Asphodel-lily.

3. LILIO-ASPHODELUS *Phœniceus minor*. Inst. R. H. The lesser red Asphodel-lily.

4. LILIO-ASPHODELUS *Americanus, flore umbellato albo, costâ purpureâ notato*. Plum. Cat. American Asphodel-lily, with white Flowers growing in an Umbel, and a Stalk marked with Purple.

5. LILIO-ASPHODELUS *Americanus, foliis scillæ, flore umbellato maximo purpureo*. Plum. Cat. American Asphodel-lily, with Leaves like the Squill, and large purple Flowers growing in an Umbel.

6. LILIO-ASPHODELUS *Americanus bifolius, flore singulari purpureo*. Plum. Cat. American Lily-asphodel, with two Leaves, and a single purple Flower.

The first, fourth, fifth, and sixth Sorts are Natives of the warm Parts of *America*; so must be preserved in Stoves, otherwise they will not live thro' the Winter in this Country. These may be propagated very easily, for their Roots creep under Ground, and send forth many new Plants at a Distance from the old Root, which should be taken off in the Spring, and each Plant put into a pretty large separate Pot, filled with rich light Earth, and then plunged into a moderate Hot-bed of Tanners-bark, to forward their taking new Root: they must also be frequently refreshed with Water, but it must not be given in large

Quantities, especially until they have taken good Root, lest it should rot the tender Fibres.

These Plants thrive and produce their Flowers plentifully in *England*, when they are constantly kept plunged in the Bark-stove; for the Fibres of the Roots will frequently creep thro' the Holes at the Bottom of the Pots, and strike into the Bark, which is of great Service to the Plants. During the winter Season, when they are not very free in Growth, they should not have too much Water; but in Summer they will require to have plenty of Water in hot Weather. When the Pots are filled with the Roots, they should be taken out and divided to propagate them; the best Time for this is, when the Leaves are in the least vigorous State, which is generally in *March*. When these Roots are parted, it should be done with Care, so as not to break or bruise the larger Roots; for those bruised are very subject to rot. These Plants should not be shifted out of the Pots too often, for that will prevent their Flowering; for where the Roots are confined, (provided it be not too much) they will always flower most freely; so that they need not be transplanted oftener than once every Year.

In Summer, when the Weather is hot, these Plants should have a large Share of free Air, by opening of the Glasses of the Stove; but they should never be placed abroad in the open Air, for they are too tender to thrive abroad in this Climate in the warmest Seasons. These Plants usually flower in *June*, *July*, and *August*, tho' sometimes they will flower both earlier and later in the Year: and when they are in Flower, they afford an agreeable Scent, and make a fine Appearance.

The second and third Sorts are very hardy Plants, which will thrive in almost any Soil or Situation, and do greatly increase by their Roots. These are to be managed in the same Manner as hath been directed, in the former Volume of the *Gardeners Dictionary*, for the two larger Sorts; so I shall not repeat it here.

LILIO-HYACINTHUS, Lily-Hyacinth.

The Characters are;

It hath a lily Flower, which is composed of six Leaves, and shaped like the Flower of Hyacinth; whose Pointal afterward becomes a globular pointed Fruit, for the most part three-cornered, and divided into three Cells, in which are contain'd many Seeds, which are almost round. To these Notes must be added, the Roots, which are scaly, and shap'd like those of the Lily.

The Species are;

1. LILIO-HYACINTHUS *vulgaris, flore caeruleo*. Inst. R. H. Common Lily-Hyacinth, with a blue Flower.

2. LILIO-HYACINTHUS *vulgaris, flore niveo*. Inst. R. H. Common Lily-Hyacinth, with a Snow-white Flower.

3. LILIO-HYACINTHUS *vulgaris, flore rubello*. Inst. R. H. Common Lily-Hyacinth, with a red Flower.

These Plants are propagated by Off-sets from their Roots, in the same Manner as *Lilies* and

and *Crown Imperials*; the best Time to take up their Roots is in *July*, soon after the Leaves are decayed. These Roots may be dried in a shady Place, and kept out of the Ground till *Michaelmas*; when they should be planted in the Borders of the Flower-garden, amongst other hardy bulbous and tuberoserooted Flowers, where they will make a pretty Diversity the following Spring, when they are in Flower.

They will thrive in almost any Soil, which is not over-moist, or too strong Clay, and in almost any Situation which is open, and not shaded by Trees. The Roots should be planted four or five Inches deep, and where they are planted in a Bed by themselves, should be placed about a Foot Distance from each other: but as they are very hardy, and do not require any Covering, so they are very proper for adorning the large Borders of the Flower-garden.

The Roots may remain in the Ground undisturbed two or three Years, which is the better Method to obtain a large Increase of their Roots, than if they are removed every Year. When the Roots are taken up and dried, the Off-sets should be intirely separated from the old Roots; and those which are small, must be soon planted again in a Nursery-bed at about five or six Inches Distance, where they may remain for a Year or two, until they have acquired Strength to flower; when they may be transplanted into the Borders of the Flower-garden. The Off-sets being small, must never remain long out of the Ground, because they are subject to shrivel; and then, if they are planted, and there should happen much Rain soon after, they will perish. These Plants flower the latter End of *April*, or the Beginning of *May*, when they make a pretty Appearance, their Flowers being in Shape like the *Starry Hyacinth*.

These Plants may also be propagated by Seeds, which should be sown in Pots or Cafes filled with fresh light Earth, soon after they are ripe; and must be treated in the same manner as hath been directed for the *Lilies* and *Martagons* in the former Volume of the *Gardeners Dictionary*. The Plants raised from Seeds will not flower, until they are four or five Years old, which discourages most People attempting to propagate them by that Method; tho', if it was more practised, there might be a greater Variety of these Flowers, than are at present to be found, since it was by this Method that the great Variety of curious Flowers now in being were obtained.

LILIO-NARCISSUS, Lily-Daffodil.

To this Article must be added:

1. LILIO-NARCISSUS *Jacobæus latifolius* *Indicus, rubro flore. Mor. Hist.* Broad-leaved Indian Lily-Daffodil, with a red Flower.
2. LILIO-NARCISSUS *Indicus maximus sphaericus, floribus plurimis rubris liliaceis. Mor. Hist.* Greatest Indian Lily-Daffodil, with many lily-shap'd spherical Flowers.
3. LILIO-NARCISSUS *Indicus pumilus polyanthos. Mor. Hist.* Dwarf Indian lily-Daffodil, with many Flowers.

4. LILIO-NARCISSUS *Zeylanicus latifolius, flore niveo externè lineâ purpureâ striato.* Broad-leaved Lily-Daffodil of *Ceylon*, with a snow-white Flower, striped with purple Lines on the Out-side.

5. LILIO-NARCISSUS *Indicus pumilus monanthos albus. Mor. Hist.* Dwarf Indian Lily-Daffodil, with one white Flower.

6. LILIO-NARCISSUS *luteus vernus. Inst. R. H.* Yellow spring Lily-Daffodil.

7. LILIO-NARCISSUS *luteus autumnalis major. Inst. R. H.* Greater yellow autumnal Lily-Daffodil, commonly called Autumnal Narcissus.

8. LILIO-NARCISSUS *luteus multiplex autumnalis. Inst. R. H.* Autumnal yellow Lily-Daffodil, with double Flowers.

9. LILIO-NARCISSUS *Bæticus luteus minor odoratissimus. Inst. R. H.* Lesser yellow Lily-Daffodil of *Bætia*, with very sweet Flowers.

The first, second, third and fourth Sorts are very tender Plants, so require to be placed in a warm Stove, otherwise they will not abide the Winter in this Climate; these are propagated by Off-sets from their Roots, because they rarely produce good Seeds in *Europe*. The best Time to transplant the Roots, and to take the Off-sets from them, is in the Spring, before they put out new Leaves. These Roots should be planted in Pots filled with fresh light sandy Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to refresh them gently in warm Weather; but they should not have too much Moisture, for that will rot the Roots, especially when they are newly transplanted, or at a Season when they are not in Action. The best Method to increase the Roots, and to have them flower strong and constantly, is to keep the Pots constantly plunged in the Bark-bed in the Stove, for when they are placed on Benches in the Stove, the extreme Fibres of the Roots, which are at the Bottom and Sides of the Pots, are never well nourished; so they do not produce their Flowers so constantly or strong, as those which are plunged. In hot-Weather these Plants should have a large Share of fresh Air, by opening of the Glasses of the Stove; but in cold Weather they must be kept warm, otherwise the Roots will decay. These Plants do not flower regularly at any Season of the Year; for sometimes they will flower in the Spring, and at other Times late in the Summer, or in Autumn; so that the Time of transplanting of their Roots should be varied according to the Time of their Flowering; for those which flower in the Spring, commonly drop their Leaves about *August*, when it is a proper Time to transplant them; whereas those which flower in Autumn, will not drop their Leaves until the Middle of Winter. Therefore these must not be removed until the Middle or latter End of *March*: so that, whenever their Leaves are decayed, and the Roots appear to be inactive, they may safely be transplanted, provided it be not in the Middle of Winter. These Plants produce very beautiful Flowers, so are worthy of a Place in every

every good Stove, there being very few Exotic Plants, which make so fine an Appearance as these, when they are in Flower.

The fifth Sort is much more hardy than any of the former, but will not abide the Cold of our Winters in *England*, if planted in the open Air: so that this Sort should be treated in the same Manner as hath been directed for the *Guernsey* and *Belladonna* Lilies, in the former Volume of the *Gardeners Dictionary*. This Sort is also propagated by Off-sets from the Roots, but it increases slowly in this Country.

The sixth, seventh, eight and ninth Sorts, will thrive in the open Air in this Country; but the seventh Sort is the only common Kind in *England*: The others are preserved by some few People, who are curious in collecting uncommon Flowers. These are all propagated by Off-sets, for they seldom produce Seed in *England*. The best Time to transplant the Autumnal Kinds, is in *July*, when their Leaves are intirely decayed; but their Roots should not be kept long out of the Ground; for they always begin to shoot out new Fibres in *August*, and in *September* they produce their Flowers; so that coming so late in the Season, they are the more esteemed, because there are not a very great Variety of more beautiful Flowers then in Perfection. These Plants are of humble Growth, so are proper to intermix with *Colchicums*, *Autumnal Crocus's*, and *Cyclamens*, in some of the Borders of the Flower-garden, where they will make a pretty Appearance for about a Month in the autumn Season.

They will thrive in almost any Soil or Situation, provided it be not too wet; for too great Moisture in Winter, lying long near their Roots, will rot them, because at that Season they are in the greatest Vigour; for after the Flowers are past, their green Leaves continue growing most Part of the Winter; and as the Warmth comes on in the Spring, so their Leaves decay.

The Sort which flowers in the Spring, should not be transplanted so soon as the others; for the Leaves of this do not decay till toward the Middle of *July*, so that these Roots should be transplanted in *August*. This requires an *East* or *South-East* Border; for if they are planted too much in the Shade, they will not flower so well, as when they have a more open or warm Situation. The Roots of all these Sorts should remain untransplanted two or three Years; for if they are removed every Year, they will not flower near so strong, nor produce so great Increase, as when they remain undisturbed: but then the Surface of the Borders in which they are planted, should be cleaned from Weeds, and gently stirred, when the green Leaves are decayed, and a little fresh Earth spread over the Borders, which will greatly encourage the Roots, and cause them to flower strong.

LILIUM, Lily.

To this Article must be added;

1. LILIUM *purpureum minus, flore pleno*. C. B. P. Lesser red Lily, with a double Flower.
2. LILIUM *cruentum polyanthos*. Hort. Eyst. Fiery Lily with many Flowers.

3. LILIUM *bulbiferum latifolium majus*. C. B. P. Greater broad-leaved bulb-bearing Lily.

4. LILIUM *bulbiferum minus*. C. B. P. Smaller Bulb-bearing Lily.

5. LILIUM *floribus reflexis, montanum, flore albicante*. C. B. P. The Martagon with a whitish Flower.

6. LILIUM *floribus reflexis, montanum, flore maculis rubris inordinatis asperso*. The Martagon with Flowers spotted inordinately with red.

7. LILIUM *floribus reflexis, montanum, flore carneo*. H. R. Par. The pale-red or flesh-colour'd Martagon.

8. LILIUM *floribus reflexis, montanum, longiore spica*. C. B. P. The Martagon, with a long Spike of Flowers.

9. LILIUM *floribus reflexis variis, five tertium*. C. B. P. The striped Martagon.

10. LILIUM *floribus reflexis, polyanthos album punctatum*. C. B. P. The white spotted Martagon, with many Flowers.

11. LILIUM *Byzantinum serotinum*. Hort. Eyst. The late-flowering Martagon of Constantinople.

12. LILIUM *floribus reflexis, Americanum maximum, flore rubente, serotinum*. The greatest American late-flowering Martagon, with red Flowers.

The first, second and third Sorts of Lily are not very common in the *English* Gardens at present, but some Years since they were in greater Plenty; for as the Taste for Gardening has greatly changed in *England* of late Years, so few People have been curious enough to preserve many of the good old Flowers; but have been fond of introducing new Kinds, which are not so beautiful as many of the old ones, which they turned out to make room for the new ones. These Sorts are sometimes found in some old Country Gardens, which have not been torn to pieces, from whence some few Persons have retrieved them. In *Holland* they are more curious in preserving all the Kinds of bulbous and tuberose-rooted Flowers, than in most other Parts of *Europe*; so that they have a very great Variety of these old Flowers in their Gardens.

The fourth Sort is pretty common in several Gardens near *London*: this may be increased very fast, by planting of the small Bulbs, which come out upon the Stalks between the Leaves, which will soon become strong Roots for Flowering; but these Bulbs should not be taken off, until the Stalks are beginning to decay.

The fifth, sixth, seventh, eighth, ninth, tenth and eleventh Sorts of Martagon, deserve a Place in every curious Flower-garden, for the Variety of their Flowers. These are all preserved by the curious Florists in *Holland*, but are not very common in the *English* Gardens.

The twelfth Sort was sent from *Pensylvania* (where it grows in the Woods) to Mr. Peter Collinson, who has a great Variety of these curious Flowers in his Garden at *Peckham*.

They are all hardy Plants, and require very little Care to preserve them, which renders them more valuable. The Manner of propagating them having been exhibited in the former

former Volume of the *Gardeners Dictionary*, I shall not repeat it here.

LINARIA, Toad-flax.

To this Article must be added ;

1. *LINARIA segetum, nummularia folio villoso*. Inst. R. H. Corn Toad-flax, with a hairy money-wort Leaf, commonly called Fluellin or Female-speedwel.

2. *LINARIA segetum, nummularia folio aurito & villoso, flore luteo*. Inst. R. H. Corn Toad-flax, with a hairy eared money-wort Leaf, and a yellow Flower.

3. *LINARIA pumila vulgatiore arvensis*. Inst. R. H. Common low annual Toad-flax.

4. *LINARIAhederaceo folio glabro, seu Cymbalaria vulgaris*. Inst. R. H. Toad-flax with a smooth Ivy-leaf, commonly known by the Name of *Cymbalaria*.

5. *LINARIA quadrifolia lutea*. C. B. P. Four-leaved yellow Toad-flax.

6. *LINARIA annua angustifolia, flosculis albis longius caudatis*. Triumphet. Narrow-leaved annual Toad-flax, with small white Flowers, having long Tails or Spurs.

7. *LINARIA quadrifolia supina*. C. B. P. Trailing four-leaved Toad-flax.

8. *LINARIA capillaceo folio, odora*. C. B. P. Sweet-smelling Toad-flax, with a very narrow Leaf.

9. *LINARIA Orientalis, flore luteo maximo*. Tourn. Cor. Eastern Toad-flax, with a very large yellow Flower.

10. *LINARIA latifolia triphylla, flore purpureo magno, rictu aureo*. Inst. R. H. Broad three-leaved Toad-flax, with a large purple Flower having a golden Standard.

11. *LINARIA annua angustifolia, flore majore luteo*. Mor. Hist. Narrow-leaved annual Toad-flax, with a larger yellow Flower.

The first Sort here mentioned, is directed by the College of Physicians, to be used in Medicine ; this stands in their Catalogue of *Simples* under the Title of *Elatine*. This, and the second Sort grow wild amongst the Corn, in divers Parts of England. They are both annual Plants, which scatter their Seeds, where-ever they are permitted to grow, and the young Plants generally come up in Autumn ; so that they are more frequently to be met with amongst *Wheat*, *Rye*, and other Crops which are sown in Autumn, than in such Lands as are ploughed in the Spring. The Flowers of these Plants are very small, and come out at the Joints close to the Footstalks of the Leaves, and the whole Plant trails on the Ground ; they usually flower in *June*, and their Seeds are ripe in *August*.

The third Sort is a low annual Plant, which is very common on arable Land in most Parts of England ; so is seldom admitted into Gardens.

The fourth Sort was originally brought from Abroad, but is now become so common in many Parts of England, as to be thought a Native by some Persons. This has been esteemed a Plant very efficacious in some Distempers, but is not used by any of the *English* Physicians at present. It grows not

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only on the Ground, but on Walls, Pales, or whatever Place the Seeds fall ; so it becomes a very troublesome Weed, where-ever it is suffered to seed.

The other Sorts are not Inhabitants of this Country ; but are by the Curious preserved in their Gardens, for the Variety of their Flowers. They are all of them Plants of short Duration, seldom continuing after they have perfected their Seeds ; so that where the Seeds are not permitted to scatter, they should be sown every Year, in order to preserve the Kinds. The Seeds should be sown in the Places where they are designed to remain ; for the Plants do not thrive so well, when they are transplanted. Some of these Seeds may be sown in the Autumn, on a dry Soil, where the Plants will come up, and abide the Winter ; and these will flower much sooner the following Year, than those which are sown in the Spring ; so that good Seeds may be certainly obtained from those, whereas the Seeds of some Sorts do not ripen well in bad Seasons on such Plants which come up from the Spring-sowing. But by sowing at the two Seasons, there will be a longer Continuance of the Plants in Flower.

As these Plants require no farther Care, when they come up, but to thin them where they grow too close, and to keep them clear from Weeds ; so they may be allowed Room in the Borders of large Gardens, where they will add to the Variety ; for they are Plants which do not spread far, so may be kept in proper Compass, and the different Colours of their Flowers will make a pretty Appearance amongst other hardy Plants.

LIPPIA.

This Plant was so named by the late Dr. William Houstoun, who discovered it at *La Vera Cruz*, in Honour to Dr. *Augustus Lippi*, a famous Botanist, who travelled to *Egypt*, and discovered many new Plants.

The Characters are ;

It hath an anomalous Flower, consisting of one Leaf, which is divided into four Parts, and rests on the Embryo, which afterwards becomes the Fruit, having two Seeds, which are inclosed in a small Covering.

We know but one Species of this Plant at present ; (*viz.*)

LIPPIA arborescens, foliis conjugatis oblongis, capitulis squamosis & rotundis. Houst. Tree Lippia, with oblong Leaves growing by Pairs, and having round scaly Heads.

This Plant, in the Country of its Native Growth, commonly rises to the Height of eighteen or twenty Feet, and hath a rough Bark : the Branches come out by Pairs opposite, as also the Leaves, which are oblong, pointed, and a little sawed on their Edges. From the Wings of the Leaves come out the Footstalks, which sustain many round scaly Heads, about the Size of a large *Grey Pea*, in which are many small yellow Flowers appearing between the Scales, which are succeeded by the Seed-vessels.

The Seeds of this Plant were sent to several curious Gardens in *Europe*, where some of the Plants have been raised; but as the Country where it came from, is very warm, so the Plants will not thrive in this Country, unless they are preserved in a warm Stove. These may be treated in the same Manner as the other shrubby Plants, which are Natives of warm Countries; which is, to keep them always in the Stove, plunged in the Bark-bed, observing to give them a large Share of Air in warm Weather, and frequently refresh them with Water; but in Winter they must be watered more sparingly, and be kept in a moderate Degree of Warmth; otherwise they will not live thro' the Winter, especially while they are young; but when they have acquired Strength, they may endure a less Share of Warmth.

As the Plants advance in their Growth, so they should be shifted into larger Pots; but this should not be too often repeated, for if they are removed into new Pots every Spring, it will be as often as they require; so that when these, and many other Exotic Plants, are too often removed, they do not thrive so well as when they are permitted to fill the Pots with their Roots. The best Time to shift these Plants is in *April*, at which Time the Tan of the Hot-bed should be stirred, and fresh Tan mixed with it, to increase the Heat. The Earth in which these Plants are planted, should be fresh and light, but not too rich.

LOBELIA.

The Characters are;

It hath a tubulous anomalous flower, consisting of one Leaf, which is divided into many Parts, each being shaped somewhat like a Tongue, and are spread open like a Hand; this is inclosed in the Cup, which afterward becomes a soft oval Fruit, which is full of Juice, and surrounds a Nut of the same Shape, which has a hard Shell.

We know but one Sort of this Plant, (*viz.*)

LOBELIA frutescens, portulacæ folio. Plum. Nov. Gen. Shrubby Lobelia, with a purslane Leaf.

This Plant was named by Father Plumier, who discovered it in *America*, in Honour to Dr. Lobel, a learned Botanist, who published the Figures of a great Number of Plants at *Antwerp* in 1581. and two or three other Books of Botany before that Time.

The Seeds of this Plant were sent to *England*, by Mr. Catesby in the Year 1724. who gathered them in the *Bahama Islands*, where the Plants grow in plenty, near the Shore of the Sea; and since that Time the Seeds have been sent to *England* by Dr. William Houston, who gathered them at *La Vera Cruz*, so that I believe the Plant is common in most of the warm Parts of *America*.

It is propagated by Seed, which must be procured from the Countries of its natural Growth, for the Plants will not produce them in *Europe*. These Seeds should be sown in Pots, filled with light sandy Earth, and then plunged into a Hot-bed of Tanners-bark, where

the Plants will come up in about three Weeks, provided the Bed is kept warm, and the Earth often watered. When the Plants are up, they should have fresh Air admitted to them in very warm Weather; but if the Nights should prove cold, the Glasses of the Hot-bed should be covered every Night with Mats, to keep the Bed in a proper Temperature of Heat; the Plants should also be frequently refreshed with Water, but it must not be given in large Quantities to them; for they are very succulent, and subject to perish with much Moisture, especially while they are young. When the Plants are about two Inches high, they should be carefully taken out of the Pots in which they were sown, and each planted in a separate small Pot, filled with fresh light sandy Earth, and then plunged into the Hot-bed again, observing to shade them in the Heat of the Day, until they have taken new Root; after which Time, the Glasses of the Hot-bed should be raised every Day to admit fresh Air to the Plants, in proportion to the Warmth of the Season. They must also be frequently refreshed with Water. In this Hot-bed the Plants may remain, until the middle or latter End of *September*, when they must be removed into the Stove, and plunged into the Tan-bed, in the warmest Part of the Stove; for they are very tender Plants while young, so must be kept very warm, otherwise they will not live thro' the Winter in this Country. They must also be frequently refreshed with Water, but it must be given to them sparingly during the Winter Season; for a little too much Moisture will rot them at that Season. In the Spring following, the Plants may be shifted into a little larger Pots, and then plunged into a fresh Hot-bed to forward their Growth; for if they are not pushed on while they are young, they seldom grow to any Size, nor will they ever flower; so that in order to have these Plants in any Beauty, they must be carefully managed. The Height to which these Plants usually grow, is five or six Feet, and they divide into several Branches, which are succulent, as are also the Leaves, which are as thick and full of Moisture, as those of *Purslane*, and being evergreen, the Plants make an agreeable Diversity amongst other tender Exotic Plants in the Stove; for they are too tender to be removed into the open Air in this Country, even in the warmest Season of the Year. The Leaves of this Plant are very subject to contract Filth, by being kept constantly in the Stove; therefore they should be washed with a Sponge every Month, to keep them clean, otherwise they will appear unightly.

LUFFA, Egyptian Cucumber.

The Characters are;

It hath a bell-shaped Flower, consisting of one Leaf, which is divided into five Parts to the Centre: there are Male and Female Flowers on the same Plant; the Male Flowers are produced on short Footstalks, having no Embryo's: but the Female Flowers rest on the Top of the Embryo's, which afterward becomes a Fruit like a Cucumber to outward Appearance, but is not fleshy, the

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Inner-part consisting of many fibres, which are elegantly netted; and there are three Cells, which are filled with Seeds, which are almost of an oval Shape.

We have but one Sort of this Plant, (*viz.*)

LUFFA Arabum. Tourn. The Luffa of the Arabians.

This Plant may be propagated after the same Manner as Cucumbers and Melons, by sowing of the Seeds on a Hot-bed the Beginning of *March*; and when the Plants are come up, they must be pricked into a fresh Hot-bed to strengthen the Plants, observing to let them have fresh Air every Day in warm Weather, and to refresh them frequently with Water; but it must not be given to them in large Quantities while they are young, or in cold Weather, lest it destroy the Plants. When the Plants have four or five Leaves, they should be planted out on a Hot-bed, where they are designed to remain, which should be under Frames, and but one Plant put into each Hole; for as these Plants send forth a great Number of Side-shoots, so where they are planted too close, they will entangle one into the other, and become so thick, as to cause the Fruit to drop. In the Management of these Plants after they are planted out for good, there must be the same Care taken as for Melons and Cucumbers, with this Difference only, that these require a larger Share of Air in warm Weather; otherwise the Vines will grow weak, and will not produce Fruit.

When the Plants have spread, so as to fill the Frames on every Side, the Frames should be raised on Bricks, and the Ends of the Plants drawn out, that they may have room to grow; for when these Plants are in a vigorous State, they will spread eight or ten Feet; so that if they are confined, they will become so thick, as to rot the tender Branches which are covered from the Air, and there will be no Fruit produced.

The Fruit, when it is young, is by some People eaten, and made into Mango's, and preserved in Pickle; but it hath a very disagreeable Taste, and is not accounted very wholesome: so these Plants are seldom cultivated in Europe, except by such Persons as are curious in Botany, for Variety.

LYCOPERSICON, Love-Apple.

To this Article must be added:

1. **LYCOPERSICON fructu rubro non striato.** *Inst. R. H.* Love-Apple with a smooth red Fruit.

2. **LYCOPERSICON fructu albo.** *Inst. R. H.* Love-Apple with a white Fruit.

3. **LYCOPERSICON Americanum arborescens, amplissimis foliis angulatis.** *Plum. Cat.* American tree-like Love-Apple, with large angular Leaves.

The two first Sorts are annual Plants, which perish soon after they have perfected their Fruit. These must be sown in the Spring on a moderate Hot-bed to bring them forward, and afterward treated in the same Manner as those Sorts which are mentioned in the former Volume of the *Gardeners Dictionary*.

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The third Sort will rise to the Height of six or eight Feet, and become woody. This Sort is propagated by Seeds, which should be sown on a Hot-bed in the Spring; and when the Plants are come up about two Inches high, they must be transplanted into a moderate Hot-bed, observing to water and shade them until they have taken new Root; after which Time they should have a large Share of free Air in warm Weather, to prevent their drawing up weak. When the Plants have obtain'd a good Share of Strength, they should be carefully taken up with Earth to their Roots, and planted into Pots filled with light rich Earth, and placed in a shady Situation until they have taken Root; when they may be removed into a warm Situation, where they may remain Abroad in the open Air, until the Middle or End of *September*, when they must be removed into the Conservatory, and placed where they may have a moderate Share of Warmth in cold Weather; by which Method the Plants may be preserved thro' the Winter, and the following Summer they will produce Fruit.

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MAGNOLIA, The Laurel-leaved Tulip-Tree, *vulgò.*

The Characters are;

It hath a rosaceous Flower, consisting of several Leaves, which are placed in a circular Order, from out of whose Cup arises the Pointal, which afterwards becomes a hard conical Fruit with many Tubers or Risings; in each of which is contained one hard Nut, which, when emitted, hangs by a long String.

The Species are:

1. **MAGNOLIA lauri folio subtus albicante.** *Catesb.* The lesser Laurel-leaved Tulip-Tree, or sweet-flowering Bay.

2. **MAGNOLIA altissima, lauro-cerasi folio amplissimo, flore ingenti candido.** *Catesb. Hist. Nat. Car.* Commonly called the Laurel-leaved Tulip-Tree, or Carolina Laurel.

3. **MAGNOLIA amplissimo flore albo, fructu caruleo.** *Plum. Nov. Gen.* Magnolia, or American Laurel, with very large Leaves, a white Flower, and blue Fruit.

The first of these Plants is common in *Virginia* and *Carolina*, where it usually rises to the Height of fifteen or sixteen Feet; but in *England* it is very rare at present. The largest Plant of this Kind which I have observed in *England*, is in the Garden of Mr. *Peter Colinson*, at *Peckham* in *Surrey*; which, altho' not above five Feet high, hath produced Flowers for several Years past. The Wood of this Tree is white and spongy, covered over with a white Bark; the Leaves are in Shape like those of the common Bay, of a pale green Colour, and white on their Backsides. In
May

May they begin to produce their Flowers, which are white and very fragrant; these are continued two Months or more, during which Time the Woods are perfumed with their Odour. When the Petals of the Flowers are decayed, the Pointal becomes a conical Fruit, about the Size of a large Walnut, thick-set with Knobs or Rifings, from each of which, when the Fruit is ripe, are discharged flat Seeds, of the Size of Kidney-Beans, having a Kernel within a thin Shell, covered with a red Skin. These red Seeds, when discharged from their Cells, fall not to the Ground; but are supported by small white Threads of about two Inches in Length, which make a very beautiful Appearance. The Fruit is at first green; when ripe, red; and when declining, turns brown. This Tree grows naturally in moist Places, and often in shallow Water; and, what is very extraordinary, they being removed on high dry Ground, become more regular and handsome, and are more prolific of Flowers and Fruit. They usually lose their Leaves in Winter, unless it be very moderate.

The second Sort is esteemed the most beautiful Tree in *America*, where they usually grow in moist swampy Woods, and often rise to the Height of sixty or seventy Feet; the Leaves are much larger than those of our common Laurel, and are of a bright green Colour; the Flowers are very large, of a white Colour, and very fragrant. The Fruit is shaped like that of the former Sort, but are much larger, of a purple Colour when ripe, and emit the Seeds in like manner; so that in Autumn they make a most beautiful Appearance, and in *May* and *June*, when they are in Flower, the circumambient Air is perfumed with their Odour: The Leaves of these Trees, remaining green all the Winter, afford an agreeable Prospect in that Season. They are of quick Growth, and generally rise with strait Stems, which is a considerable Addition to their Beauty; and since they are hardy enough to resist the Cold of our Climate in the open Air, I doubt not but we shall have the Pleasure of seeing many of these Trees growing in the *English* Gardens in a few Years, where we may hope to have them annually produce their beautiful Flowers: for in the Garden of Sir *John Colleton* in *Devonshire*, there is a Tree which has flowered several Years; and last Year, *i. e.* Anno 1737. there was a small Tree in the Garden of Sir *Charles Wager* at *Parsons-Green* near *Fulham*, which produced Flowers.

The third Sort was discovered by Father *Plumier* in some of the *French* Settlements in *America*. The Fruit of this Sort (as it is represented in the Plate of Father *Plumier's* *Nova Genera*) is very different from that of the second Sort, and the Flowers appear much smaller; so that, if his Figure is true, it must be a different Sort from either of the former; but there are no Plants of his Kind in *England* as yet, so far as I can learn, tho' it is very probable, there are Trees enough of it to be met with in some Parts of *America*, which be-

long to the *English*, were they sought for by skilful Persons, who could distinguish them.

These Plants are all of them propagated from Seeds, for they do not take Root well by Laying; nor do those few Plants which have been obtained from Layers thrive, nor are they ever like to make handsome Plants: but as there are no Plants in *England* which are likely to produce Seeds in many Years, so there is no Way to obtain them, but by procuring their Seeds from *America*. These Seeds should be sown in Tubs of Earth so soon as they are ripe (for if they are kept out of the Ground any time, they will not grow): these Tubs should be sent over to *England* as soon as possible, and when they arrive, they should be placed on a gentle Hot-bed, observing to shade them from the Sun, and often refresh them with Water. In this Situation the Plants will appear above Ground in a Month or five Weeks; and if they are kept moist, and shaded from the Sun, will make considerable Progress. In *July* you should begin to enure them to the open Air, but they should not be exposed to the Sun; for while they are young, the great Heat of the Sun is very injurious to them. In *October* the Tubs should be placed under a Hot-bed Frame, where they may be covered in frosty Weather with the Glasses; but in mild Weather they should be exposed to the open Air; for if they are kept too close, they will cast their Leaves. In *March* following these Plants may be transplanted out of the Tubs; in doing of which you should be careful to take them up with as much Earth to their Roots as possible; then place each Plant into a Pot, which should be filled with light fresh Earth, giving them some Water to settle the Earth to their Roots; and place the Pots into a Frame again, where they should be covered with the Glasses in cold Weather, or drying Winds; but they must be exposed when the Weather is mild, and should be frequently watered. In this Frame they may remain about a Month, after which they should be placed Abroad in a shady Situation, observing to water them often in dry Weather. These Plants may remain two Years in the Pots, that they may be removed into Shelter in Winter, because they are somewhat tender while young; but afterwards they may be turned out of the Pots into the full Ground, observing to plant them in a pretty moist Soil, where they will make considerable Progress in a few Years.

There have been several of these Plants destroyed, by the Over-care some Persons have taken to cover them in Winter: for where this hath been done, the Plants usually lose their leading Bud, or die down to the Ground; so that it is by much the better Method, to plant them abroad in a well-sheltered Situation, and to let them remain always uncovered: but when these Plants are planted abroad, it should always be done in the Spring, that they may have Time to get good Roots in the Ground before Winter; and in very hard Frost, if there is some Mulch laid on the Surface of the Ground about their

Roots

Roots to prevent the Frost from penetrating of the Ground, it will be of great Service in preserving of the Plants; but this Mulch should not remain long round the Trees, after the Frost is gone off, lest it should injure the Bark of their Stems, by detaining the Moisture about them.

MAMEI, The Mammee-Tree.

The Characters are;

It hath a rosaceous Flower, which consists of several Leaves placed in a circular Order, from whose Cup arises the Pointal, which afterward becomes an almost spherical fleshy Fruit, containing two or three Seeds inclosed in hard rough Shells.

There is but one Species of this Tree known; viz.

MAMEI magno fructu, persicæ sapore. Plum. Nov. Gen. 44. The Mammee, with a large Fruit tasting like a Peach.

This Tree, in the *West-Indies*, grows to the Height of sixty or seventy Feet; the Leaves are large and stiff, and continue green all the Year; the Fruit is as large as a Man's Fist; when ripe, is of a yellowish green Colour, and is very grateful to the Taste. It grows in great Plenty in the *Spanish West-Indies*, where the Fruit is generally sold in their Markets, and is esteemed one of the best Fruits of the Country. It also grows on the Hills in *Jamaica*, and has been transplanted into most of the *Caribbee Islands*, where it thrives exceeding well.

In *England* there are some few of these Plants, which are preserved with great Care by such as are curious in cultivating exotic Plants; but there are none of any considerable Size: so that we cannot expect to see either Fruit or Flowers for some Years. These Plants may be propagated by planting the Stones which are often brought from the *West-Indies*; (but these Stones should be very fresh, otherwise they will not grow) into Pots filled with light fresh Earth, and plunged into a Hot-bed of Tan-ners-bark, observing to water the Earth, whenever it appears dry. In about a Month the Plants will begin to appear above Ground; after which they must be frequently refreshed with Water; and in hot Weather the Glasses of the Hot-bed should be raised, to let in fresh Air. In two Months the Roots of the Plants will have filled the Pots, when you should provide some Pots of a little larger Size, into which you should transplant the Plants, being careful to preserve as much Earth to their Roots as possible; then you should fill up the Pots with fresh light Earth, and plunge them into the Bark-bed again, observing to water and shade them, until they have taken Root; after which they should be constantly refreshed with Water, (as you shall find they want it) and must have Air in hot Weather. In this Bed they may remain till *Michaelmas*, when they must be removed into the Bark-stove, where they must be constantly kept, observing to refresh them with Water frequently, as also to clean their Leaves from the Filth they are apt to contract in the

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Stove; and the Spring following they should be shifted into fresh Earth, and, if they require it, into larger Pots; and the Bark-bed must be fresh stirred, and some new Tan mixed therewith, to renew the Heat. This stirring of the Tan should be repeated as often as there may be a Necessity for it, which is at least three times a Year; and when it begins to rot, some new Tan must be added to renew the Heat. In all other respects this Tree may be treated after the Manner directed for the Coffee-Tree.

MANCANILLA, The Manchineel-Tree.

The Characters are;

It hath Male Flowers, (or Katkins) which are produced at remote Distances from the Embryo's on the same Tree; the Embryo becomes a round fleshy Fruit, in which is contained a rough woody Nut, inclosing four or five flat Seeds.

The Species are;

1. MANCANILLA pyri facie. Plum. Nov. Gen. 50. The Manchineel with the Face of a Pear-Tree.

2. MANCANILLA aquifolii foliis. Plum. Nov. Gen. 50. The Manchineel with Leaves like Holly.

3. MANCANILLA lauri foliis oblongis. Plum. Nov. Gen. 50. The Manchineel with oblong laurel Leaves.

The Manchineel is a Native of the *West-Indies*, where it grows on low sandy Land, or near Gullies, where Water runs. The three Sorts here mentioned are distinguished by Botanists, but I believe their Difference is not remarked by the Natives. They grow to be very large Trees, equal to the Size of an Oak, and are much esteemed for their Wood, which is sawn out into Planks, and brought over to *England*: It is used for Cabinets, Book-Cases, &c. and will polish very well, is of a beautiful Grain, and will last a long time. In cutting down of these Trees, they are very careful to burn out the Juice of the Bark, before they begin; otherwise the Persons are in Danger of losing their Eyes by some of the Sap getting into them, which is of a milky Colour, and so very caustic, that it will raise Blisters on the Skin, and burn Holes in Linen. The Fruit of this Tree, when ripe, is of the Colour and Size of a Golden Pippen; for which many of the *Europeans* have taken it, and some by eating thereof lost their Lives, and others have greatly suffered; the Flesh is not much thicker than a Crown-piece, and not very disagreeable to the Taste, but will corrode the Mouth and Throat. The Leaves of these Trees also abound with a milky Juice, which is of the same Nature; so that it is dangerous being under their Drip: The Cattle in *America* never shelter themselves under them, nor will any Vegetable scarcely grow under their Shade; yet the Goats eat this Fruit, without any manifest Injury to themselves, or their Milk, which is not altered by this Food.

In *England* there are some of these Trees preserved by Persons who are curious in propagating exotic Plants. They may be raised

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from Seeds, by putting the whole Apple or Nut into a Pot of fresh Earth, and then plunge it into a Hot-bed of Tanners Bark, observing to refresh the Earth often with Water. From one of these Nuts will arise four or five Plants, which, when grown about three Inches high, may be separated, and placed each into a small Pot filled with light rich Earth, and plunged again into the Hot-bed, observing to water and shade them, until they have taken Root; after which they must be managed as was before directed for the *Mamme*, to which I refer the Reader to avoid Repetition; in shifting of these Plants from one Pot into another, great Care should be had, not to break their Leaves; for then they will bleed greatly, and thereby the Plants will be weakened; and it is very dangerous to let any of the Juice fall on any tender Part of the Body, for it will raise a Blister: and if it fall on Cloth, it will make Holes therein, as bad as if *Aqua fortis* were dropp'd on it.

MANIHOT, Cassavi or Cassada.

The Characters are;

It hath a short spreading bell-shap'd Flower, consisting of one Leaf, which is cut into several Parts, whose Pointal afterwards becomes a roundish Fruit, composed of three Cells, which are joined together, in each of which is contained one oblong Seed. To these Notes should be added; Male Flowers, which have no Pointal, growing round the Female, which fall off, and are never fruitful.

The Species are;

1. MANIHOT *Theveti juca* & *Cassavi*. *J. B. Inst. R. H.* The common Cassavi or Cassada.
2. MANIHOT *spinossissima, folio vitigineo*. *Plum. Cat.* The most prickly Cassavi, with a chaste-tree Leaf.
3. MANIHOT *arborescens minus spinosa, floribus albis umbellatis, foliis aconiti urentibus*. *Houft.* Tree-like less prickly Cassavi, with white Flowers growing in Umbels, and a stinging wolfsbane Leaf.
4. MANIHOT *frutescens non spinosa, foliis glabris & minus laciniatis*. *Houft.* Shrubby Cassavi without Prickles, and smooth Leaves, which are less divided.
5. MANIHOT *ulmi folio ampliore*. *Plum. Cat.* Cassavi with an ample Elm-leaf.
6. MANIHOT *ulmi folio angustiore*. *Plum. Cat.* Cassavi with a narrow Elm-leaf.

The first Sort is cultivated in all the warm Parts of *America*, where the Root is ground to Flour, after being divested of its Juice; and then is made into Cakes, which are used for Bread. Of this there are two Sorts, which are not distinguished by the Botanists, one of which, (*viz.*) the most common, hath purplish Stalks, and the Veins of the Leaves are also of a purplish Colour; but the Stalks of the other are green, and the Leaves are of a lighter green Colour. The last of these Sorts is not venomous, even while the Roots are fresh, and full of Juice; for the Negroes frequently dig up the Roots, and after roasting of them, they eat them in the same Manner as Potatoes, without any ill Effects. This Sort

is known by the *Spaniards*, who call it *Camanio*; but this being more light and spongy than the common Sort, and requiring a longer Time to grow to Maturity, so it is planted by few People in *America*.

The *Cassada* is propagated by Cuttings, which the Inhabitants of *America* plant, at their rainy Seasons; these Cuttings are taken from those Plants, whose Roots are grown to Maturity, for Use. The Cuttings are generally about fifteen or sixteen Inches in Length, and are planted a Foot or fourteen Inches deep in the Ground, leaving about two or three Inches of the Cutting above the Surface. The Land in which this is planted, must be well wrought, and cleansed from the Roots of noxious Weeds; then there should be a Trench opened cross the Ground about a Foot deep, in which the Cuttings should be placed at about a Foot Distance from each other, leaving a small Part of each Cutting above the Surface: then the Earth should be filled into the Trench again, and gently pressed with the Feet about each Cutting, to prevent the Sun and Air from penetrating of the Ground, which would dry the Cuttings too much, and so prevent their taking Root. These Trenches should be made about three Feet asunder, that there may be Room to hough between the Rows to destroy the Weeds, which, if permitted to grow, will soon overbear the Plants, and destroy them. The Cuttings should not be planted immediately after they are taken from the old Plants, but should be laid to dry in a shady Place for two Days; for as they abound with a milky Juice, so, if the Part where they are cut, be not healed over, they will be subject to rot, as is the Case with most milky Plants.

When the Cuttings have taken Root, they require no farther Care, but to keep them clear from Weeds; and in about eight or nine Months Time, the Roots will have grown to Maturity, which in good Ground will be as large as the Calf of a Man's Leg, but commonly as large as good *Parsnips*, if the Ground be tolerably good. Then the Ground must be opened about each Plant to take up the Roots intire, and pare off their Skins; then they throw them into a Tub of Water, and wash them well; after which they rasp them on a coarse Rasp, to reduce them to a rough Flour like Sawdust; then they press out all the Juice with a Press, and afterward it is fit for Use.

In *Europe* these Plants are preserved by many Persons, who are curious in collecting of rare Plants; but they will not thrive, unless they are kept in Stoves; for they are all of them very tender Plants. The second Sort is only propagated by Seeds, which must be procured from the Places of its natural Growth, for it never produces good Seeds in this Country.

The Seeds of this Sort were sent into *England* by the late Dr. *William Houftoun*, who gathered them on the Sands near *Vera Cruz* in the *Spanish West-Indies*, where it grows in great Plenty; it was also found at *Campechy* by Mr. *Robert Millar* Surgeon. This Kind seldom rises above eighteen Inches or two Feet high, and the Stalks, Leaves, and every Part of

of the Plant, is closely beset with strong Prickles; so that it is difficult to touch them, without receiving an Injury from the Spines. At the Top of the Shoots, there are some white Flowers, which are produced in an Umbel; some of which are *Male*, having many Stamina or Threads in each; but the *Female* Flowers rest on the Embryos, which afterward become the Fruit.

The third Sort was also discovered by the late Dr. *William Houstoun* near *La Vera Cruz*: this grows to the Height of twelve or fourteen Feet; the Trunk of this becomes woody, and divides at the Top into many Branches, which are beset with Leaves, in Shape like those of *Wolfsbane*; these are armed with small Spines, which sting like those of the Nettle. The Flowers of this Kind are white, and grow in an Umbel on the Top of the Branches, and are produced throughout the whole Year. This Sort may be propagated by Cuttings in the same Manner as the first.

The fourth Sort is somewhat like the whole-some Kind, but is not found in any of our Settlements: this was found in the *Island of Cuba*, by the late Dr. *Houstoun*. All these Sorts have large tuberose Roots, which abide some Years, so may be preserved by the Curious. When the Kinds are obtained from Abroad, they must be planted in Pots filled with fresh light Earth, which is not over-rich, and they should be plunged in the Bark-bed in the Stove; where, during the Summer Season, they should have a large Share of fresh Air admitted to them, by opening of the Glasses in warm Weather, and they must be frequently refreshed with Water; but in Winter they must be kept very warm, and should be watered more sparingly, especially if the Plants die down to the Root, which the second Sort is very apt to do in Winter in this Country; at which Time Moisture will rot the Roots, while they are in an unactive State.

When the Seeds of these Plants are procured from Abroad, they should be sown in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing frequently to water the Earth, in order to promote the Vegetation of the Seeds; and when the Plants are come up two Inches high, they should be transplanted each into a separate Pot filled with fresh light Earth, and plunged into the Hot-bed again, being careful to shade them from the Sun, until they have taken fresh Root; after which time they should have fresh Air admitted to them every Day, in proportion to the Warmth of the Season, and they must be frequently refreshed with Water. In this Hot-bed the Plants may remain during the summer Season, but at *Michaelmas* they must be removed into the Stove, and treated after the Manner as was before directed.

The Seeds of these Plants very often prove abortive, having a fair outer Covering; but when broken have no Germ within, so that very few of them grow; therefore it is proper to put them into Water, and take only such for sowing, as sink to the Bottom of

the Vessel; for all those which swim on the Surface of the Water, are bad Seeds.

MANURE.

There are many different Kinds of Manure, which are now commonly used in different Parts of *England*, for enriching of the several Soils: but these having been treated of in the former Volume of the *Gardeners Dictionary*, and being pretty generally known, I shall not repeat them in this Place; but proceed to take Notice of some other Kinds of Manure, which are at present neglected by most People, tho' they might be used with equal Success on many Lands, as most of those now commonly in Use.

Oak-bark, after the Tanners have used it for Tanning of Leather, when laid in a Heap, and rotted, is an excellent Manure, especially for stiff cold Land, in which one Load of this Manure will improve the Ground more, and last longer, than two Loads of the richest Dungs; and yet it is very common to see large Heaps of this remaining in the Tanners Yards for Years, in several Parts of *England*, where Manure of other Kinds is very scarce. Of late Years this Tan has been greatly used for Hot-beds in several Parts of *England*, and is found to exceed Horse-dung greatly for that Purpose, the Fermentation being moderate, and of long Continuance; so that a Bed of Tan, when rightly made, will continue in a moderate Temperature of Heat for five or six Months; and when the Heat begins to decay, if it be stirred up with a Dung-fork, and some fresh Tan added to it, the Heat will renew again, and last for some Months; so that these Beds are by far the most kindly for exotic Plants; and whatever Plants are plunged into these Beds, if they are permitted to root thro' the Bottom of the Pots, and strike into the Tan, they will thrive more in one Month, than they did in four Months, while they were confined to the Pots. I have frequently observed many Kinds of Plants, which have rooted thro' the Pot into the Tan, and have sent forth Roots upward of twelve Feet each way, in less than three Months, and the Plants have advanced in Proportion, which is a plain Indication, that Plants are greatly nourished by the rotten Tan. After the Tan hath been used for a Hot-bed, I have spread it on the Ground for Manure, and have found it has greatly enriched the Ground; but it is much better for cold strong Land, than for light hot Ground, because it is of a warm Nature, and will loosen and separate the Earth; so that where this Manure hath been used three or four times, it hath made the Land very loose, which before was strong, and not easy to be wrought. When this Manure is laid on Grass, it should be done soon after *Michaelmas*, that the winter Rains may wash it into the Ground; for if it is laid on in the Spring, it will burn the Grass, and instead of improving it, will greatly injure it for that Season. Where it is used for Corn-land, it should be spread on the Surface, before the last Ploughing, that it may be turned down for the Fibres of the Corn to reach it in the

the Spring; for if it lies too near the Surface, it will forward the Growth of the Corn in Winter; but in the Spring, when the Nourishment is chiefly wanted to encourage the Stems, it will be nearly consumed, and the Corn will receive little Advantage from it. But it is not proper to have this Manure lie too near the Plants; for when this has happened, I have frequently observed it prejudicial to most Plants, but especially to *bulbous* and *tuberosed* rooted Flowers, which are very subject to rot, where it lies near their Roots; yet when it is buried just deep enough for the Fibres of their Roots to reach it in the Spring, the Flowers have been exceedingly improved by it. And in some Places, where this Manure hath been used in Kitchen-gardens, it hath greatly improved the Vegetables; so that it is to be wondered, that this should not be employ'd on the Land in every Country where it can be obtained.

Rotten Vegetables of most Sorts do also greatly enrich Land, so that where other Manure is scarce, these may be used with great Success. The Weeds of Ponds, Lakes or Ditches, being dragged out before they feed, and laid in Heaps to rot, will make excellent Manure, as will most other Sorts of Weeds; but where-ever any of these are employed, they should be cut down as soon as they begin to flower; for if they are suffered to stand until their Seeds are ripe, the Land will be stored with Weeds, which cannot be destroyed in two or three Years; nay, some Kinds of Weeds, if they are permitted to stand so long as to form their Seed, they will perfect them after they are cut down, so may be equally prejudicial to the Land: therefore the surest Method is to cut them down just as they begin to flower, at which Time most Sorts of Vegetables are in their greatest Vigour, being then stronger, and fuller of Juice, than when their Seeds are farther advanced; so that at that Time they abound most with Salts, and therefore are more proper for the intended Purpose. In rotting of these Vegetables, it will be proper to mix some Earth, Mud or any other such-like Substance, with them, to prevent their taking Fire in their Fermentation, which they are very subject to, where they are laid in large Heaps without any other Mixture to prevent it; and it will be proper to cover the Heaps over with Earth, Mud or Dung, to detain the Salts, otherwise many of the finer Particles will evaporate in fermenting. When these Vegetables are thoroughly rotted, they will form a solid Mass, which will cut like Butter, and be very full of Oil, which will greatly enrich Land.

In such Places where there are neither Ponds, Lakes or Ditches, to supply these Weeds, and the Situation being far from the Sea, (from whence also may be obtained many Sorts of Weeds for this Purpose) there may be many Sorts of Vegetables sown, in order to plough them into the Grounds, when they are full-grown, to enrich the Land: at present those chiefly used for this Purpose are *Buck-wheat*, *Vetches* and *Spurrey*. And in

some Countries abroad, they commonly sow *Lupines* upon such Land as they want to improve; and when they are full-grown, they mow them down, and plough them into the Ground, which they esteem to be a good Manure. This is chiefly used in the *South* of *France* and in *Italy*, where some of the Sorts of *Lupines* grow naturally; but these are not proper for this Climate, because if the Season should prove cold or wet, after the *Lupines* are sown, they will rot in the Ground; so that it is very hazardous sowing of them in this Country; and there being many other Sorts of Plants, which are hardy, and grow to a much larger Size with us than *Lupines*, should be preferred to them for this Purpose. I have known some Land sown pretty thick with *Horse-beans*, which have been mow'd down when they were in Blossom, and ploughed in for a Crop of Wheat, and it hath largely repayed the Owner. Almost any of the pulse Kind which grow large, are very proper to be sown for this Purpose; and, next to these, may be sown *Mustard*, *Cole-seed*, or any of these large growing Plants, which, if cut before they form their Seeds, and ploughed in, will greatly enrich the Ground.

The Refuse of Kitchen-gardens, when laid in Heaps and rotted, will also afford a good Sort of Manure for Corn-land; but as this is not to be obtained in any Quantity, excepting near great Cities, so in such Places Dung being also to be had pretty reasonable, the other will not be much sought after.

I have lately been informed of another Improvement, which may be of great Use in several Parts of the Kingdom; which is the mowing down of *Fern*, while it is green and tender, and laying it in Heaps to rot, which will make an excellent Manure for Land; and as this is a most troublesome Plant in many Parts of *England*, so by frequently mowing of it, it may be destroyed; and when rotted, a good Quantity of Manure may be obtained, which will more than defray the Charges of cutting it down. In some Places, where no Tan or Horse-dung can be obtained, they have cut down *Fern*, and chopped it pretty small, and laid it in a Heap to ferment; then have used it for Hot-beds, for which Purpose it has answered extremely well. The first Person who informed me of this, was Mr. *Samuel Brewer*, a very curious Person in Gardening, who made several Hot-beds of *Fern*, which, he says, continued their Heat for many Months; so that he prefers it to Tan, or any sort of Dung, where a moderate lasting Heat is required.

There are many other Kinds of Weeds, which infest the Land in many Parts of *England*, which, if cut down at a proper Time, and laid to rot, might be used to great Advantage for Manuring of Land; and hereby the Weeds would in time be destroyed, and the Manure would more than pay the Expence of doing it; but few Persons who are employed in Husbandry, care to go out of their old beaten Road to try Experiments, even where they are attended with little Expence, and nothing hazarded; otherwise there is great

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Room to make many Improvements of this Kind, especially in Countries where Dung or other common Manure is very scarce, in which Places if some Experiments were properly made of rotting whatever Vegetables could be procured in the Neighbourhood, a great Improvement might be made of the Land.

The Ashes of all Kinds of Vegetables are also an excellent Manure for Land, so that where the Ground is over-run with *Bushes*, *Brambles*, &c. which are woody, if they are grubbed up in Summer, and spread abroad to dry for a little Time, then gently consumed to Ashes, and these spread on the Land, it will greatly improve it. The Method for doing this is already explained under the Article of Land.

Rotten Wood, and Saw-dust when rotted, is a very good Manure for strong Land, because it loosens the Parts of the Earth, and renders it light.

Bones, Horns, and other Parts of Animals, do also enrich Land greatly, as do decayed Fish, so that in some Places where these can be easily obtained, a great Improvement may be made of them.

Sea-sand and Shells are in several Parts of England used to great Advantage, especially in *Devonshire*, where they are at the Expence of fetching the Sand and Shells on Horses Backs, twelve or fourteen Miles. The Land on which they lay this Manure, is a strong Loam, inclining to Clay; so that this separates the Parts and the Salts which are contained in the Manure, and is a very great Improvement of their Land. Coral and such Kinds of stony Plants which grow on the Rocks, are filled with Salts which are very beneficial to Land; but as these Bodies are hard, so the Improvement is not the first or second Year after they are laid on the Ground; because they require Time to pulverise them before their Salts can mix with the Earth to impregnate it. Therefore Dressings of this Kind are seldom used by Tenants, who want to reap the Fruit of their Labour as soon as possible. But these Manures are much better for cold strong Land, than for that which is light and sandy. In some Countries, at a great Distance from the Sea, have been discovered great Quantities of Fossil Shells, which have been dug out of the Earth, and used as Manure, which have improved the Ground; but these are not near so full of Salts, as those Shells which are taken from the Shore; therefore where the latter can be obtained, they are to be preferred to the former.

Where the Land lies near the Sea, so that either Sand, Shells, Corals, Wrecks or Sea Weeds can be obtained at an easy Expence, they are by far the best Kinds of Manure, because they enrich the Land for several Years; for as their Salts are closely locked up, so they are communicated by degrees to the Land, as the Heat and Cold causes the Bodies to pulverise, and fall into small Parts. So that where Sand and the smaller Kinds of Sea Weeds are used, if they are laid on the Land in proper Quantities, it will enrich it for six or seven

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Years; but Shells, Corals, and other hard Bodies, will continue many Years longer.

In Dunging of Land, I have frequently observed in several Parts of *England*, but especially in *Cambridgeshire*, a very wrong Practice; for the Dung is laid on the Land before Midsummer, and spread abroad perhaps a Month or six Weeks before the Ground is ploughed; in which Time the Sun exhales all the Goodness of the Dung, so that what remains is of little Service to the Land. Therefore when Dung or any other soft Manure is used, it should not be laid on the Ground until the last Time of ploughing, when it should be buried as soon as possible, to prevent the Evaporation of the Salts. Indeed where Shells, Corals, or any other hard Substances, are used for Manure, if these are spread abroad some Months before the Ground is ploughed, the Sun, Rain, or Frost will cause them to pulverise, much sooner than when they are buried and excluded from the Air.

MARANTA, Indian Arrow-root.

The Characters are;

It hath a Flower consisting of one Leaf, which is almost funnel-shaped, opening in six Parts, three of which are alternately larger than the other. The lower Part of the Flower-cup afterwards becomes an oval-shaped Fruit, consisting of one Cell, in which is one hard rough Seed.

The Species are;

1. *MARANTA arundinacea, canna-cori folio.* Plum. Nov. Gen. Reed-like Indian Arrow-root, with a Leaf like the Flowering Reed.

2. *MARANTA canna-cori folio, flore minimo albo.* Houtt. Indian Arrow-root, with a Leaf like the Flowering Reed, and the least white Flower.

The first Sort was discovered by Father Plumier in some of the French Settlements in *America*, who gave it the Name, in Honour to one *Bartholomew Maranta* an antient Botanist. The Seeds of this Kind were sent to *Europe* by the late Dr. *William Houstoun*, who found the Plant growing in Plenty near *La Vera Cruz* in *New Spain*.

The other Sort was brought from some of the Spanish Settlements in *America*, into the Islands of *Barbados* and *Jamaica*, where it is cultivated in their Gardens as a medicinal Plant, it being a sovereign Remedy to cure the Bite of Wasps, and to expel the Poison of the Manchineel Tree. The Indians apply the Root to expel the Poison of their Arrows, which they use with great Success. They take up the Roots, and after cleansing them from Dirt, they mash them, and apply it as a Poultice to the wounded Part, which draws out the Poison, and heals the Wound. It will also stop a Gangreen, if it be applied before it is gone too far, so that it is a very valuable Plant.

These Plants being Natives of a warm Country, are very tender, so will not live in this Country, unless they are preserved in Stoves. They may be propagated by their creeping Roots, which should be parted in

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the Middle of *March*, just before they begin to push out new Leaves. These Roots should be planted in Pots filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing now and then to refresh them with Water; but it must not be given to them in large Quantities; for too much Moisture will soon rot the Roots, when they are in an unactive State. When the green Leaves appear above Ground, the Plants will require more frequently to be watered, and they should have free Air admitted to them every Day, in proportion to the Warmth of the Season, and the Heat of the Bed, in which they are placed. As the Plants advance in Strength, so they should have a greater Share of Air, but they must constantly remain in the Stove plunged in the Tan, otherwise they will not thrive; for when the Pots are placed on Shelves in the Stove, the Moisture passes too soon from the Fibres, which generally are spread to the Sides and Bottoms of the Pots, so that the Plants do not receive much Nourishment from the Water. But where they are constantly kept in the Tanners-bark, and have proper Air and Moisture, they will thrive, so as from a small Root to fill the Pot in which it was planted, in one Summer. About *Michaelmas* the first Sort will begin to decay, and in a short Time after the Leaves will die to the Ground; but the Pots must be continued all the Winter in the Bark-bed, otherwise the Roots will perish; for altho' they are in an unactive State, yet they will not keep good very long, when taken out of the Ground; and if the Pots are taken out of the Tan, and placed in any dry Part of the Stove, the Roots often shrivel and decay; but when they are continued in the Tan, they should have but little Water given to them, when their Leaves are decayed, lest it rot them. This first Sort doth flower constantly in *July* and *August*, and many times will produce ripe Seeds in *England*; but the second Sort doth not flower so constant, nor do the Flowers appear so conspicuous, being very small, and of a short Duration. This Sort never hath produced any Seeds in *England*, nor could I ever observe any Rudiment of a Seed-vessel succeeding the Flower. The green Leaves abide on this Sort most Part of the Winter, seldom decaying till *February*, and sometimes will continue green, until fresh Leaves come up, and thrust the old ones off; in which Particular there is a more remarkable Difference between the two Sorts, than can be observed in the Face of the Plants.

MARTYNIA.

This Name was given by the late Dr. *William Houstoun* to this Genus of Plants, which he discovered in *America*, in Honour to his Friend Mr. *John Martyn*, Professor of Botany at *Cambridge*.

The Characters are;

It hath an anomalous Flower consisting of one Leaf, which is divided into two Lips: the upper Lip is erect, and slightly cut into two Parts; but the under Lip is cut into three Parts, the Middle Segment being larger than the other two. The

Flower is succeeded by a Fruit having a strong thick Covering, in which is included a very hard Nut, having two sharp crooked Horns at one End; and in the Nut are included four Seeds, lodged in so many separate Cells.

The Species are;

1. *MARTYNIA annua villosa* & *viscosa*, folio subrotundo, flore magno rubro. Houst. Annual hairy viscous Martynia, with a roundish Leaf, and a large red Flower.

2. *MARTYNIA annua villosa* & *viscosa*, aceris folio, flore albo, tubo longissimo. Houst. Annual hairy viscous Martynia, with a maple Leaf, and a white Flower, having a very long Tube.

3. *MARTYNIA perennis*, folio subrotundo rugoso, flore caeruleo, radice dentariae. Linn. Perennial Martynia, with a rough roundish Leaf, a blue Flower, and a tooth-wort Root.

The first of these Plants was discovered by the late Dr. *William Houstoun*, near *La Vera Cruz* in *New Spain*, from whence he sent the Seeds into *England*, which succeeded very well in the Physic-garden at *Chelsea*; and in the Year 1731, several of these Plants were raised, which produced their beautiful Flowers, and perfected their Seed; from whence several Plants were raised the succeeding Year.

The second Sort was discovered by the same curious Gentleman in the Year 1733, near *Cartagena* in *New Spain*, from whence he sent dried Samples of the Plant, with some of the Seeds, to *England*; but they did not succeed.

The Seeds of the third Sort were sent from *Cartagena* by Mr. *Robert Millar* Surgeon, from which some of the Plants were raised in the Gardens of Mr. *George Clifford* of *Amsterdam*; where they have flowered, but have not produced any Seeds in *Europe*. This Sort increases greatly by its Roots, which creep under Ground, so as to fill the Pots in which they are planted, in one Season.

The two first Sorts being annual Plants, are only propagated by Seed, which should be sown in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; where (if the Earth is duly watered to promote the Vegetation of the Seed) the Plants will appear in about a Fortnight, or three Weeks, and will grow pretty fast, if the Bed is warm: so they should be transplanted in a little Time after they come up, each into a separate Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to water them well, as also to shade them from the Sun, until they have taken new Root; after which Time they should have a large Share of fresh Air admitted to them in warm Weather, by raising of the Glasses of the Hot-bed every Day, with Bricks or Stones, and the Plants must be frequently watered. With this Management, the Plants will make great Progress, so as to fill the Pots with their Roots in about a Month's Time; when they should be shifted into Pots, about a Foot Diameter at the Top, which should be filled with light rich Earth, and then plunged into the Hot-bed in the Bark-stove, where

where they should be allowed Room, because they put out many Side-branches, and will grow three Feet high or more, according to the Warmth of the Bed, and the Care which is taken to supply them constantly with Water. About the Middle of *July*, the Plants will begin to shew their Flowers, which are produced in a Spike from the Top of the Plants, which, of the first Sort, are like those of the *Fox-glove*. As the first Spike of Flowers decays, they are succeeded by Spikes from all the Side-branches; so that the Plants continue in Flower until *Michaelmas* or later, if the Season proves favourable: but it is only from the first Spike of Flowers that good Seeds can be expected in this Country; so that particular Care should be taken, that none of those are pulled off or destroyed; because it is very difficult to obtain good Seeds in this Country; and I believe few of those which are produced on the Side-branches in the natural Country of their Growth, are duly ripened; for I have received a great Quantity of these Seeds from abroad, which have appeared to be very good, and yet few of them have produced Plants.

The Seeds of these Plants have a strong green Covering over them, as thick as the outer Covering of an Almond; and when the Seeds are ripe, the Covering opens, and lets the Seed fall, in the same Manner as the Covering of *Almonds*, *Walnuts*, &c. In each Covering there is one hard Nut, in Shape somewhat like a Beetle, having two sharp crooked Horns at one End. This Nut contains four Embryo's; but there are seldom more than two Seeds which are perfect in any of them. However, when they are sown, the whole Nut must be planted; for it is so hard, that it is impossible to take out the Seeds without spoiling of them; and where there are two Plants produced from the same Nut, they are easily separated, when they are transplanted. These Seeds will continue good for some Years; for I sowed a pretty large Quantity of them in the Year 1734, Part of which I sowed the following Year, but had not one Plant produced; the Remainder of the Seeds I divided, and sowed some of them every succeeding Year, without any Success, until the present Year 1738, when I sowed all the Seeds I had left, from which I had one Plant produced. So that if the Seeds are good, it is evident they will grow when they are four Years old. Therefore, whenever we receive good Seeds from Abroad, or save any in this Country which are perfectly ripened, it will be proper to preserve some of them for a Year or two, lest a bad Season should happen, when the Plants may not perfect their Seeds; so that if this Precaution be not taken, the *Species* may be lost in *Europe*.

The third Sort dies to the Root every Winter, and rises again the succeeding Spring; this must be constantly preserved in the Stove, and plunged into the Bark-bed, otherwise it will not thrive in this Country. During the Winter Season, when the Plants are decayed, they should have but little Water given to them; for Moisture at that Time will rot the

Roots. In the Beginning of *March*, just before the Plants begin to shoot, is the proper Season to transplant and part the Roots; when they should be planted into Pots of a Middle Size, filled with light rich Earth, and then plunged into the Bark-bed, which should at this Time be renewed with fresh Tan. When the Plants come up, they must be frequently refreshed with Water; but it must not be given to them in large Quantities, lest it rot their tender Roots; and as the Warmth of the Season increases, it will be proper to admit a large Share of fresh Air, which will greatly strengthen the Plants; but they must constantly remain in the Stove, otherwise they will not produce Flowers in this Country. The Time of their Flowering is in the End of *July*, and in *August*; and in *October*, the Plants die to their Roots.

MELILOTUS, Melilot.

The *Species* omitted in the former Volume are;

1. MELILOTUS *corniculis reflexis, major*. C. B. P. Greater Melilot, with reflected Horns.

2. MELILOTUS *corniculis reflexis, minor vel repens*. C. B. P. Smaller creeping Melilot, with reflexed Horns.

3. MELILOTUS *Italica, folliculis rotundis*. C. B. P. Italian Melilot, with round Leaves.

4. MELILOTUS *angustifolia repens, folliculis rotundis*. C. B. P. Narrow-leaved creeping Melilot, with round smaller Leaves.

5. MELILOTUS *lutea minor, floribus & folliculis minoribus, spicatis & dense dispositis*. Mor. Hist. Smaller yellow Melilot, with smaller Flowers and Pods, growing in a thick Spike.

6. MELILOTUS *Messanensis procumbens, folliculis rugosis sublongis, spicis florum brevibus*. Raii. Syn. Trailing Melilot of *Messina*, with rough oblong Leaves, and short Spikes of Flowers.

7. MELILOTUS *Cretica humillima humifusa, flore albo magno*. Tourn. Cor. Low Melilot of *Crete*, with a large white Flower.

8. MELILOTUS *capsulis reni similibus, in capitulum congestis*. Tourn. Melilot Trefoil or Nonesuch.

The six first-mentioned Sorts are annual Plants, which grow wild in the South of *France*, and in *Italy*, from whence the Seeds of them have been procured by such Persons who are curious in Botany. These Sorts are all of them preserved in Botanic Gardens for Variety, but they are Plants of no great Beauty, nor are they used in Medicine. But if there were Trials made of some of the Kinds, I believe they might be found useful to sow for feeding of Cattle, as the last Sort here mentioned is at present in divers Parts of *England*, which was the Reason of my enumerating these Sorts here. For as some of the other Sorts are very hardy, and will grow on almost any Soil, so if they are found to be equally good with the Nonesuch, they may be better worth cultivating, because they are of much larger Growth; so consequently will produce much more Fodder on an Acre of Land, than that will. But as I have had no Opportunity of trying if Cattle will eat any

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any of them, so I cannot recommend them, but by way of Trial, to such Persons who are curious in making these Sorts of Improvement.

As these are annual Plants, so their Seeds must be sown every Year; or if they are permitted to scatter when ripe, the Plants will come up in Autumn, and will abide the Winters Cold very well in this Country; and those Plants which come up in the Autumn, will grow much larger than those which are sown in the Spring, and will more certainly produce good Seeds. Therefore those Persons who are curious to preserve their Kinds, should either sow them in Autumn soon after the Seeds are ripe, or permit them to scatter their Seeds; and the self-sown Plants may be easily transplanted, where they are designed to grow; and they will require no farther Care, but to keep them clear from Weeds. They will all of them grow on almost any Soil; but they will thrive better on dry light sandy Soil, than on a stiff clayey Ground.

The seventh Sort is an abiding Plant, which rarely produces Seeds in this Country, so is propagated by parting of the Roots in the Spring. This Sort is not so hardy as the others; therefore some of the Plants should be preserved in Pots, that they may be removed into Shelter in Winter; for very hard Frosts will destroy them, if they are exposed. But they must always have as much free Air as possible in mild Weather, so that if they are placed under a common Hot-bed Frame in Winter, where the Glasses may be drawn off every Day in mild Weather, and only covered in hard Frost, the Plants will thrive much better than where they are placed in a Green-house. In Summer the Plants must be frequently watered in dry Weather, and kept clear from Weeds, which is all the Culture they require.

The Nonesuch which is now cultivated in the open Fields in several Parts of England, is an Inhabitant of this Kingdom; growing wild by the Sides of Paths, and on arable Land, in great Plenty every-where near London; and if the Seeds are permitted to scatter, there will be a Supply of Plants to stock the Ground, so that it often becomes a very troublesome Weed in Gardens, and is difficult to extirpate after it hath gotten Possession.

The Seeds of this Plant are sown in the Spring, either alone, or with *Barley*, the latter of which I should recommend; for as this is a low trailing Plant, so it will not injure the *Barley*, which will get forward before the Nonesuch comes up; and if there doth not arise a great Crop of the Nonesuch, yet being permitted to stand until the *Barley* is ripe, the Seeds of the Nonesuch will be ripe, and most of it scattered, by that Time; and after the Corn is taken off, the Rains in Autumn will soon bring up the Plants, which will flourish all the Winter, and the Spring following will afford an early Feed for Cattle.

Where this Plant is sown by itself, it must not be fed or mow'd, until the Seeds are ripe; for as it is an annual Plant, so where it is eaten, or cut down, the Roots will perish; and if

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there is not a Supply of young Plants to succeed them, the Crop will be destroyed in one Season. Indeed, as these Plants begin to flower very young, and near their Roots, so before the Seeds are formed at the Extremity of the Shoots, those produced near the Root will be ripe and scattered, from whence young Plants will come up, and supply the Crop; which has deceived some Persons, who have thought this Plant will abide two or three Years, and produce several Crops from the same Roots; which is a great Mistake, for the Root perishes annually. But as the Plants produce such Quantities of Seed, at almost every Joynt of the Stalks, so it is almost impossible to destroy the Crop totally, if the Plants are permitted to grow to any Size, before they are fed or cut down.

The Seeds of Nonesuch being smaller than Clover-seed, a less Quantity will sow an Acre. If it is sown by itself, there should be ten Pounds allowed to an Acre; but if it is sown with *Barley*, six Pounds will be sufficient. When it is sown with *Barley*, the *Barley* should be first sown and harrowed, and then the Seeds of the *Nonesuch* should be sowed, and the Land rolled, which will bury this Seed deep enough.

To the Article M E L O add,

There hath of late Years been a very great Variety of Melons, introduced into the Gardens of the Curious, which are much higher flavour'd, than most of the old Sorts; but they are not quite so hardy, nor do the Fruit of these new Sorts ever grow to so large Size as some of the old ones, which is the Reason of their not being more common. However, as they are much preferable for the Table, I shall just mention the Names of some of the principal Sorts, for the Satisfaction of the Curious.

1. The ZATTE MELON: This is a small rough-coated Fruit, which seldom grows much larger than a Man's Fist, is very red within, and the Flesh is very delicate.

2. The SUCADO MELON: This is larger than the former, of an oblong Shape, more wrought on the Outside, is very red within, and the Flesh is firm, and of a vinous Flavour.

3. The CANTALEUPT MELON: This is a longer Fruit than either of the former, is pretty much wrought on the Outside, the Flesh is not quite so red as of either of them, but is of a rich vinous Flavour.

4. The ROMANETTO MELON: This is a middle-sized Fruit, of an oblong Shape; the outer Coat is greener than either of the former, and not very much wrought; the Flesh is very red, and of a delicate Flavour.

These Sorts are the best worth cultivating for private Families, who esteem a Fruit for its delicate Flavour, more than for the Size: but those who raise them to supply the Markets, must have regard to the Size of the Fruit, being paid for them according to their Magnitude. The Seeds of these Sorts are only to be procured from Persons who are very careful to save them distinctly; for if they are purchased

purchased from the common Venders of Seeds, they are not much to be depended on.

Of late Years there has been a Method of raising the general Crop of Melons under oiled Paper, instead of Bell or Hand-glasses; which has succeeded so well, as to be now very commonly practised in the Gardens near London. The Person who first practised this Method, was Mr. John Howard Gardener, at St. Leonard's Hill in Windsor Forest, who continued it for many Years with great Success, and was not followed in it by any other Person, until his Son, who was Gardener to his Grace the Duke of Chandos, practised it at Cannons; and then it became more generally known, and has since been constantly practised by many Gardeners. But this Method being at present unknown to Persons who reside in the Country, I shall insert it in this Place. The Manner of raising the Plants, as also of making the Ridges, being the same as for Hand-glasses, I shall not repeat either, but proceed to give Directions for preparing the Papers. You must provide yourself with a Quantity of strong Cap-paper, nine Sheets of which must be allowed to each Hole of Melons. These nine Sheets of Paper must be joined together with Paste (which when done will spread the Width of a common Mat which is used for Covering). When the Paste is dry, the Paper should be spread on a Board, or hung against a Wall, and with a Brush should be rubbed over with Oil, which need be done but on one Side; for the Oil will sink through the Paper, if it be only lightly brushed over; then the Papers should hang out till they are dry, after which they may be used for covering your Melon-plants. These Papers should be prepared, before you plant out your Plants into the Holes, that they may be ready to cover them, which may be performed in the following Manner; viz. After the Ridges are made, you must procure some small Hoops, or slender Withies, which should be thrust into the Ground on each Side of the Ridge, and arched over in the same Manner as is practised for covering Flower-beds; then the Papers may be laid over the Hoops, &c. and fastened down at each End with a Cord, or a few large Stones or Bricks laid upon their Ends, to prevent the Winds from blowing them off. These Papers should be kept close over the Plants, while they are young, or in bad Weather; but when the Plants have obtained Strength, and the Weather is favourable, they should be raised on one Side to admit Air to the Plants, and in soft Rains they should be taken quite off, that the Plants may enjoy the Benefit thereof. These Papers may continue over the Plants throughout the Season, observing only to take them off in soft Rains, and admit Air under them in warm Weather to the Plants, as was before directed. The Plants will thrive much better under these than under Glasses; for the Rays of Light will be more equally admitted through the Paper when oiled, than through a Glass, which collects the Rays, and thereby occasions too great a Heat in Summer under them, than most Plants can endure. So that Plants under Glasses are subject to Danger,

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from the great Inequality of Heat; whereas those under Papers enjoy a more equal Degree, and hereby the Plants are continued much longer in Vigour; as I have always observed those under Papers in great Health, when those under Glasses have been decayed, though they were in the same Situation, and under the same Management. The only Danger of these Plants miscarrying is, when the Papers are kept too close over them, which will cause the Plants to grow weak, and of a pale sickly Complexion; whenever this is the Case, there cannot be much good Fruit expected from them.

Though I have directed the making of the Ridges after the same Manner as for Hand-glasses, yet there are some Persons who only dig Holes in the Ground at proper Distances, into each of which they put two Barrows-full of hot Dung, covering it over with the Earth taken out of the Holes, into which they plant their Melon-plants; then arch over each Hole with a few slender Wands, covering them with the Papers, and managing them as hath been directed; in which Method I have observed they have had a prodigious Crop of Melons, with a much less Expence than usual.

N. B. These oiled Papers will last one whole Season very well; so that the Expence of Paper and Oil will amount to Three-pence Half-penny for each Hole.

These oil Papers have been used by several Persons, to cover tender exotic Plants in Summer, with great Success, as also to cover Beds of Cuttings of tender Plants, for which Purpose there is no other Covering so proper. They are also used to cover the Flowers of large Carnations, in order to screen them from the violent Heat of the Sun, and to preserve them dry, without which many of the largest Flowers would not blow to Advantage. The Method used by Mr. Samuel Brewer to cover his Flowers with oiled Paper, is, to make a Frame of Wire, just in the same Form as the Glass-covers, which are used for this Purpose, over which he pastes the oiled Paper; which if carefully done, will last several Years, and are much preferable to Glasses.

MELOCACTUS, Melon Thistle.

To this Article must be added;

1. MELOCACTUS *Americanus major, spinis albis longissimis recurvis*. The greater American Melon Thistle, with very long white crooked Spines.

2. MELOCACTUS *Americanus major, striis in spiram intortis, spinis brevibus aduncis*. Greater American Melon Thistle, with spiral Ribs, and short crooked Spines.

3. MELOCACTUS *Americanus major, spinis tenuibus flavescens*. Greater Melon Thistle, with slender yellowish Spines.

4. MELOCACTUS *Mexicanus, spinis creberrimis corallinis latis & recurvis*. Houst. Melon Thistle of Mexico, with broad flat crooked Spines.

The three first Sorts I have received from the English Settlements in America, where I doubt not there are several other Varieties, if they

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they were examined by Persons skilful in Botany. These are generally older before they put out their Caps on their Tops, than the common Sort; for I have had two of the Sorts five or six Years in *England*, which have increased in their Magnitude greatly since I received them; but neither of them has any Tendency to put out Caps, tho' some of the common Sort, not near so large, have produced large Caps, and have ripened their Fruit. So that I am in Doubt whether some of these Sorts ever produce Caps in the natural Places of their Growth; for they may produce their Fruit, either from the Sides of the Plant, as the small *American* Sort doth, or round the Centre of the Head, as I have seen some of them represented in Figures.

The fourth Sort was brought from *Mexico*, by the late Dr. *William Houstoun*; but being a long time in the Passage, and the Plants receiving some Wet, they all of them were decayed before they arrived in *England*. This is one of the most strange Plants of this Genus I ever saw; the Spines, which are produced very closely all over the Plant, are two Inches or more in Length, and near a quarter of an Inch broad at their Base; are extremely strong, and of a brownish red Colour; these the Inhabitants of *Mexico* make use of to pick their Teeth, from whence they give the Name of *Visnaga*, i. e. Tooth-pick, to these Plants.

As these Plants are esteemed by the Curious, for their singular Structure being so very different from all the *European* Plants; so most People who have the Conveniency of Stoves to preserve them, are extremely curious to obtain them from Abroad; but the Persons who have the Care of bringing them, for want of Judgment, generally destroy them with Water, before they arrive in *England*: for altho' they often arrive in seeming Health, yet the Moisture which they have imbibed in their Passage, will rot them in a little time after they are planted. Therefore, whenever these Plants are brought over planted in Tubs, the best Way is to take them up as soon as they arrive, and set them upon the Flues in the Stove to dry; where (if they arrive early in the Summer) they may remain two Months before they are planted; but when they come late in the Year, they should remain on the Flues all the Winter; and about the Beginning of *April*, they may be planted in *Lime-rubbish* (as hath been directed in the former Volume of the *Gardeners Dictionary*); and these Plants will more certainly succeed, than those which are planted soon after they arrive, as I have several times experienced. Some of these Plants I have kept dry out of Earth, on the Flues or in some dry warm Part of the Stove, nine Months, and have then planted them, and they succeeded better than those which were planted soon after I received them, tho' they were to Appearance not near so likely to live. So that if those Gentlemen who bring over these Plants, would take them out of the Ground, and hang them up in a dry warm Part of the Ship, where they might not be

bruised or eaten by Vermin; they will more certainly succeed, than those Plants which are brought over in Tubs of Earth.

The smaller Melon Thistle, which was some Years since very rare in *England*, is now become pretty common in the Gardens of the Curious: for as they produce a great many Fruit annually, so they may be propagated in great Quantities by Seed; nay, if the Seeds are permitted to fall on the Earth, in the Pots where the old Plants are growing, the young Plants will come up in great Abundance, so that a Person may be soon stocked with them.

MENISPERMUM, Moon-feed.

The Characters are;

It hath a rosaceous Flower, consisting of several small Leaves, which are placed round the Embryo in a circular Order. The Pointal, which is divided into three Parts at the Top, afterward becomes the Fruit or Berry, in which is included one flat Seed, which is, when ripe, hollowed like the Appearance of the Moon.

The Species are:

1. MENISPERMUM *Canadense scandens*, *hederaceo folio*. Acad. Reg. Scien. 1706. Climbing *Canady* Moon-feed, with an Ivy-leaf.

2. MENISPERMUM *Canadense scandens*, *umbilicato folio*. Acad. Reg. Scien. 1706. Climbing *Canady* Moon-feed, with an umbilicated Leaf.

3. MENISPERMUM *folio hederaceo*. Hort. Elth. Ivy-leaved Moon-feed.

The first and second Sorts have been long Inhabitants of the *European* Gardens. These produce flexible woody Shoots from their Roots, which twist round whatever Plants stand near them, and will grow to the Height of ten or twelve Feet, and produce their Flowers in Autumn, but they rarely perfect their Seed in this Country.

These Plants are Natives of *Virginia*, and most of the Northern Parts of *America*, from whence they were many Years since brought into *Europe*, and were preserved in the Green-houses in Winter, as tender Plants; but of late Years they have been planted in the full Ground, where they endure the Winter's Cold extremely well without any Shelter. They may be easily propagated by the Suckers, which are produced in Plenty from their Roots: these should be taken off with some Fibres adhering to them, in the Spring, before the Plants make new Shoots; and may be planted where they are designed to remain, observing to water them, if the Season should prove dry, until they have taken Root; after which Time they will require no farther Care, but to keep them clear from Weeds, and to support them with Stakes, unless they are planted near Trees, round which they may fasten themselves; for if they trail on the Ground, they will not thrive.

The third Sort was brought from *Carolina* by Mr. *Catesby*. This is a Plant of humbler Growth than either of the former, seldom rising above four or five Feet high in this Country, and the Stems do not become woody.

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woody. The Leaves are also much smaller than either of the other Sorts. This Plant will endure the Cold of ordinary Winters very well in the open Air, provided it is planted in a warm Soil, and a sheltered Situation. It may be propagated by Suckers from the Root, as the two former Sorts, which are also produced in as great Plenty.

The two former Sorts were by Dr. Plukenet ranged amongst the Ivies, from some Similitude in the outward Appearance of the Plants to the Ivy. So, from his Name, they were commonly called in the Gardens, Ivy with a bind-weed Leaf.

MENTZELIA.

The Characters are ;

It hath a rose-shaped Flower, consisting of several Leaves, which are placed in a circular Order, and rest on the Flower-cup, which afterwards becomes a membranaceous tubulous Fruit, containing many small Seeds.

We know but one Species of this Plant at present ; (*viz.*)

MENTZELIA foliis & fructibus asperis. Plum. Nov. Gen. Mentzelia with rough Leaves and Fruit.

The Name was given to this Plant by Father Plumier, who discovered it in the French Settlements in America, in Honour to Dr. Mentzelius, who was Physician to the Elector of Brandenburg, and who published an Index of Plants, in Latin, Greek and High-Dutch.

This Plant grows plentifully in the Island of Jamaica, from whence the Seeds were sent to England by the late Dr. William Houstoun, which have succeeded in the Physic-garden at Chelsea.

It is an annual Plant, which perishes soon after the Seeds are ripe ; so must be sown on a Hot-bed early in the Spring, that the Plants may be brought forward early in the Season, otherwise they will not produce ripe Seed in this Country. When the Plants are come up about an Inch high, they should be each transplanted into a separate Half-penny-pot, filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, being careful to shade them from the Sun, until they have taken new Root ; after which Time they must be constantly watered every other Day in warm Weather, and should have fresh Air every Day admitted to them, in proportion to the Warmth of the Season, and the Heat of the Bed in which they are plunged. In about six Weeks or two Months after transplanting, if the Plants have made a good Progress, they will have filled the Pots with their Roots ; when they should be shifted into larger Pots, which must be filled with light rich Earth, and then plunged into the Bark-bed in the Stove, that they may have Room to grow in Height, observing, as before, to water them duly, as also to admit fresh Air to them every Day in warm Weather ; with which Management the Plants will rise to the Height of three Feet, and will produce ripe Seeds the latter End of August, or the Beginning of September. These Plants are closely beset all

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over with small crooked Spines, by which they will fasten themselves to whatever touches them so strongly, that by a Person's going near them, they will stick to the Cloaths, and the Branches of the Plant will separate and adhere to the Cloaths in like Manner as the Seeds of *Clivers* or *Goosegrasses*.

MILLERIA.

The Characters are ;

It hath a compound Flower, consisting of several Florets, and one half Floret, contained in one common Flower-cup ; but these Florets are barren, and the half Floret, which is fruitful, is succeeded by one Seed, which is surrounded by the Flower-cup.

The Species are ;

1. *MILLERIA annua erecta major, foliis conjugatis, floribus spicatis luteis.* Houst. Greater upright annual *Milleria*, with Leaves growing opposite, and yellow Flowers growing in a Spike.

2. *MILLERIA annua erecta minor, foliis parietariæ, floribus ex foliorum alis.* Houst. Lesser upright annual *Milleria*, with pellitory Leaves, and the Flowers growing from the Wings of the Leaves.

3. *MILLERIA annua erecta ramiflor, foliis maculatis, profundius serratis.* Martyn. Cent. 1. Upright branching annual *Milleria*, with spotted Leaves, which are deeply sawed.

4. *MILLERIA annua erecta minor, folio parietariæ longiori, floribus ex foliorum alis.* Lesser upright annual *Milleria*, with a longer pellitory Leaf, and the Flowers growing from the Wings of the Leaves.

The two first Sorts were discovered by the late Dr. William Houstoun at Campechy in the Year 1731, who constituted this Genus, on finding the Characters differing from all the Genus's which were before established. The Seeds of both these Sorts he sent to several curious Persons in England and Holland, where they have succeeded very well.

The other two Sorts were discovered by Mr. Robert Millar, Surgeon, at Campechy in the Year 1734, from whence he sent their Seeds into England, where they have also succeeded very well. The third Sort nearly resembles the first in its Leaves, Flowers and Growth ; but branches a little more than that doth, and the Leaves are spotted with Black ; the Flowers also are a little larger. The fourth Sort, which is somewhat like the second grows taller, and doth not branch from the Bottom as the Second doth ; the Leaves are also much longer, but there appears no Difference in their Flowers.

The Seeds of these Plants should be sown early in the Spring, on a moderate Hot-bed ; and when the Plants are come up about two Inches, they should be each transplanted into a separate Pot, filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, being careful to shade them from the Sun until they have taken Root, as also to water them frequently. After the Plants are rooted, they should have a large Share of free Air admitted to them, by raising of

of the Glasses of the Hot-bed every Day when the Weather is fair; and they must be constantly watered every Day in hot Weather, for they are very thirsty Plants. With this Management, the Plants will in a Month after transplanting rise to a considerable Height; therefore they should be shifted into larger Pots, and placed in the Stove, plunging them into the Bark-bed, where they may have room to grow, especially the first and third Sorts, which usually grow eight or nine Feet high, where they are well managed. But the second and fourth Sorts seldom rise above three Feet high, and do not spread their Branches very far, so these may be allowed less Room.

In the Middle of July these Plants will begin to flower, and the Seeds will be ripe soon after; therefore they must be gathered as soon as they change of a dark brown Colour, otherwise they will soon fall off, especially those of the two large Kinds, which will drop on the least Touch when they are ripe. These Plants will continue flowering till Michaelmas or later, if the Season proves favourable; but when the Cold of the Autumn comes on, they will soon decay.

MIMOSA, The Sensitive Plant.

To this Article must be added;

1. *MIMOSA herbacea procumbens* & *spinosa*, *caule quadrangulo, filiquis quadrivalvibus*. Houst. Trailing herbaceous prickly Sensitive Plant, with square Stalks, and Pods having four Cells.

2. *MIMOSA fruticosa spinosa, filiquis latis birsutis* & *articulatis*. Houst. Prickly shrubby Sensitive Plant, with broad hairy jointed Pods.

3. *MIMOSA non spinosa, palustris* & *herbacea, procumbens, flore luteo pleno*. Houst. Smooth marsh herbaceous trailing Sensitive Plant, with full yellow Flowers.

4. *MIMOSA frutescens spinosa* & *birsuta, tenuibus acaciae foliis, filiquis articulatis*. Houst. Shrubby prickly and hairy Sensitive Plant, with narrow Leaves like the Acacia, and jointed Pods.

5. *MIMOSA bumilis frutescens* & *spinosa, foliis acaciae latioribus, filiquis conglobatis*. Dwarf shrubby and prickly Sensitive Plant, with broad acacia Leaves, and Pods growing in Clusters.

6. *MIMOSA herbacea non spinosa minima repens*. Sloan. Cat. Jam. The least creeping herbaceous Sensitive Plant, without Spines, commonly called Sensitive Grass.

The three first-mentioned Sorts were discovered by the late Dr. William Houstoun at La Vera Cruz, from whence he sent their Seeds into England, from which many Plants were raised. The first Sort rises to the Height of three Feet, and hath slender square Stalks, which are strongly armed with Spines. This is a perennial Plant, which creeps at the Root; so that it may be propagated by the Suckers, which are produced pretty plentifully. This hath not as yet produced any Flowers in England, for the Shoots generally die to the Root in Winter, and rise again the following

Spring. The Leaves of this Sort do not only close on being touched, but also fall downward, so that it is ranked amongst those Kinds which are commonly called humble Plants.

The second Sort rises to the Height of six or seven Feet, and hath a woody Stem, which is strongly armed with crooked Spines. The Leaves consist of several Wings, which have very narrow Pinnae; these Leaves are also beset on their under Side with sharp crooked Spines all along the Midrib, so that it is troublesome to go amongst the Plants in the natural Place of their Growth. The Flowers of this Kind are of a bright purple Colour, which are succeeded by flat hairy jointed Pods, in which are included the Seeds. This Sort grows very plentifully in moist rich Places about La Vera Cruz, in the Spanish West-Indies.

This Plant hath produced Flowers in England, but hath not perfected Seed, tho' it hath lived over the Winter, and has grown to a large Size. The Leaves of this Sort close very soon on the Touch, but they fall downward very slowly, so that it is not ranged amongst the humble Plants.

The third Sort grows plentifully in standing Waters near La Vera Cruz, where the Branches float on the Water, in like Manner as do the Pond-weeds in this Country: but where the Water dries up, and leaves the Plants while they are young, they will grow more erect; and those of them which have grown in England, have risen to the Height of four or five Feet; but they spread themselves on every Side, and required some Support, when they were full-grown. This Sort hath produced Flowers in England, but hath not perfected Seed; and being an annual Plant, is at present lost in Europe. This is one of those commonly called Sensitive Plants, for the Leaves do not fall on being touched. The fourth and fifth Sorts were discovered by Mr. Robert Millar, Surgeon, at Carthagena, from whence he sent their Seeds into England, which have succeeded in several Gardens of the Curious. These are both of them of the humble Kind, their Leaves falling on the slightest Touch. They will both of them live thro' the Winter, if they are placed in a very warm Stove.

The sixth Sort is very common in Jamaica, where it creeps to the Ground, and grows in short thick Tufts: this is very quick in its Motion; for, on drawing a Stick over the Plants, they will immediately contract, and leave the Impression for some time, till the Plants recover.

All these Sorts are propagated by Seeds, in the same Manner as hath been directed in the former Volume of the Gardeners Dictionary; so I shall not repeat it in this Place.

MITELLA.

To this Article must be added;

MITELLA Americana maxima tinctoria. Inf. R. H. The Arnotto or Anotto.

This Plant rises to the Height of ten or twelve Feet, and hath a woody Stem, which is beset with many Branches at the Top, which are furnished with broad Leaves, shaped some-

somewhat like a Heart; from these Branches the Flowers come out in small Clusters, which consist of several Leaves, and expand in form of a Rose; these are of a pale Flesh-colour. The Flowers are succeeded by brown Pods, shaped like a *Mitre*, and are echinated on the Outside in the same Manner as the Chestnut; in which Pods are contained many irregular Seeds, which are of a red Colour.

The Seeds of this Plant are used to make a Dye, by the Inhabitants of *America*. The Manner of preparing it is as follows: They steep the Seeds in Water, until the outward red Part is dissolved intirely from them; then they boil the Water which is impregnated, several times, (after the same manner as they do the Juice of the *Sugar Cane*) until it becomes of a pretty thick Consistence; then they put it into Canvass, which is spread over a Fire of hot Ashes, which doth not flame, to bring it to a farther Consistence, when they make it up into Balls, which are sent into *Europe*, where it is used in Dying.

The *Indians* make use of this Colour to paint their Bodies, especially when they go to War, in order, as some suppose, to prevent their discovering the Blood when they are wounded, being almost of the same Colour, so is supposed to make them courageous. But the chief Use of it is to prevent the *Musketa's* and Flies from annoying them. This Dye is also mix'd with Chocolate to give it a Colour.

It grows in the warmest Parts of *America*, from whence the Seeds are pretty frequently sent into *England*. These Seeds should be sown early in the Spring of the Year, in small Pots filled with light rich Earth, which should be plunged into a moderate Hot-bed of Tanners-bark, and the Earth should be frequently watered, to forward the Vegetation of the Seed. When the Plants are come up two Inches high, they should be carefully transplanted, each into a separate small Pot; filled with light rich Earth, and then plunged again into the Tanners-bark, observing to shade them from the Sun, until they have taken new Root; after which Time they must be frequently refreshed with Water, and in hot Weather the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants. With this Management the Plants will grow to be a Foot high by the Middle of *July*, and will have filled the Pots with their Roots; therefore they should then be shaken out of the Pots, and their Roots carefully trimmed, and then put into Pots a little larger, and plunged again into the Hot-bed, and managed as before. These Plants may remain in the Hot-bed until toward *Michaelmas*, when the Nights begin to be cold, at which Time they must be removed into the Stove, and plunged into the Bark-bed, where they may enjoy a good Share of Warmth in the winter Season, otherwise they cannot be preserved in this Country: they must be frequently refreshed with Water during the Winter Season, but they should not have too much given to them each time, especially if they should cast their Leaves, which they frequently do toward the Spring. As these

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Plants are very tender, so they should constantly remain in the Stove, observing in the summer Season, when the Weather is warm, to admit a large Share of fresh Air to the Plants, as also to water them frequently, but in cold Weather they must be kept very warm. When these Rules are duly observed, the Plants will thrive very fast, and grow to the same Height which they usually do in their native Soil.

MONBIN, The Hog Plum-tree.

The Characters are;

It hath a rose-shaped-Flower, consisting of several Leaves, which are ranged in a circular Order; from whose Cup arises the Pointal, which afterward becomes an oval fleshy soft Fruit inclosing a hard Stone, in which are contained four Kernels or Seeds.

We have but one Sort of this Tree; (*viz.*)

MONBIN, *arbor, foliis fraxini, fructu luteo racemoso.* Plum. Nov. Gen. The Hog Plum-tree vulgo.

This Tree is a Native of the warmest Parts of *America*, where it grows in the *Savanna's* and low marshy Places in great Plenty. It rises to be forty or fifty Feet high, and divides into a great many crooked Branches, which are beset with winged Leaves somewhat like those of the *Asb-tree*. The Flowers, which appear in the Spring, are produced in large pyramidal Bunches at the Extremity of the Branches, which are of a white Colour, and are very sweet. These are succeeded by several yellow oval-shaped Plums, growing in Clusters. The Wood of this Tree being soft, is used instead of Cork, to stop Bottles in *America*.

This is a very tender Tree, so must be constantly kept in the Stove, otherwise it cannot be preserved in this Country. It may be propagated by Cuttings (which is the most common Method practised in *America*); but if these are to be brought to *England*, they should be planted pretty close together in Tubs of Earth, and placed in a shady Situation, until they have taken good Root, before they are put on Board the Ship; and in their Passage they must be kept from Salt-water, nor should they be too plentifully supplied with fresh; for too much Moisture hath destroyed many of these Plants, before they have arrived in *England*; for if the tender Fibres are rotted, the Bark of the older Shoots will soon decay. When they arrive in pretty good Health, they should be carefully taken out of the Tubs, and each planted into a separate Pot, filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing frequently to refresh them with Water; but it must not be given to them in large Quantities, until they have taken good Root. If they come over in a hot Season, it will be proper to shade them from the Sun, until they are rooted; and at that Season they will require but a very moderate Warmth in the Hot-bed; for too great Warmth would then be very injurious to them. But when they arrive late in the Year, the Bed should have a larger Share of Heat, in order to

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forward their Rooting, before the Winter's Cold comes on; for if they are not pretty well rooted before Winter, there will be small Hopes of their living till Spring, so that they should never be sent over too late in the Year.

These Plants may also be propagated by sowing of their Stones, which should be brought over as fresh as possible. These should be sown in the Spring of the Year, in small Pots filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark, where, if the Bed is in a good Temperature for Heat, and the Pots of Earth are duly moistened, the Plants will come up in about a Month after Sowing, when they should have fresh Air admitted to them every Day, in proportion to the Warmth of the Season, and they must be frequently refreshed with Water. In about three Weeks or a Month after the Plants appear above Ground, they will be fit to transplant, when each Plant should be planted in a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, where they must be shaded from the Sun, until they have taken new Root; after which Time they must be duly watered, and have a pretty large Share of fresh Air in warm Weather.

When the Plants have grown so large as to have filled the Pots with their Roots, they should be shifted into others of a larger Size, being careful not to shake the Earth from their Roots, but the Fibres round the Ball of Earth should be trimm'd. They must then be plunged into the Hot-bed again, provided the Plants are not too tall to stand under the Glasses, without Injury to their Leaves; in which Case they must be plunged into the Bark-bed in the Stove, where they may have Room to advance in Height. But if they have Room in the Hot-bed, they may remain there till about *Michaelmas*, when the Nights begin to be cold, at which Time they must be removed into the Stove, and plunged into the Bark-bed, in the warmest Part of the Stove. During the winter Season they must be often refreshed with Water; but it must not be given to them in large Quantities, when the Season is cold; especially, if they should cast their Leaves, which they frequently do toward the Spring, then they must have but little Water, until they put out new Leaves; because too much Moisture is injurious to them, when they are in almost an unactive State.

These Plants are too tender to live in the open Air in *England*, even in the warmest Season of the Year; so that they should constantly remain in the Bark-stove, where they should have a large Share of fresh Air in Summer; and they will at that Season require to be plentifully watered, for they naturally grow in low moist Places; but in Winter they must be kept very warm: with this Management, the Plants will thrive very fast, and in few Years will produce their Fruit.

MONTIA.

The Characters are;

It hath a funnel-shaped Flower, consisting of one Leaf, whose under Part is tubulous, but the upper Part is expanded, and cut into five Parts; the Fruit which succeeds the Flower, is a bicapsular flat Seed-vessel, which is surrounded on the Borders with a Plume, which expands like Rays.

We have but one Plant of this Genus; (viz.)

MONTIA arborescens, abutili folio serrato, fructu racemoso. *Houft.* Tree-like Montia with a sawed abutilon Leaf, and the Fruit growing in Bunches.

This Plant was discovered by the late Dr. *William Houftoun*, near old *La Vera Cruz* in *New Spain*, who gave this Name to it in Honour to Dr. *Monti*, Professor of Botany at *Bononia*.

It grows about sixteen or eighteen Feet high, and hath a woody Stem, which divides into several Branches; these are beset with Leaves somewhat like those of the yellow Mallow, which are five Inches long, and four broad, ending in a Point; these are sawed round the Edges, and have a Down on their under Sides. The Flowers are of a greenish yellow Colour, and are produced in Bunches. The Season of its Flowering is in *January*, in the native Place of its Growth, and the Seeds are ripe in *March*.

This Plant is propagated by Seed, which should be sown early in the Spring on a Hot-bed; and when the Plants are come up about two Inches high, they should be each transplanted into a separate small Pot, filled with light fresh Earth, and plunged into a moderate Hot-bed, being careful to shade them from the Sun until they have taken Root; after which Time they must have a large Share of fresh Air admitted to them in warm Weather, and they must be duly watered. In this Hot-bed the Plants may remain till Autumn, when they must be removed into the Stove; and the first Year, while the Plants are young, it will be proper to plunge them in the Bark-bed; but the following Winters they will do very well in the dry Stove, which should be kept up to temperate Heat. And in the Middle of the Summer, they will bear to be exposed for near three Months, provided they are placed in a warm Situation. In hot Weather these Plants must be frequently watered, and as they advance in their Growth, so they should be shifted into larger Pots, filled with light fresh Earth. With this Management the Plants will thrive very well, and in two or three Years will produce Flowers.

MORINA.

The Characters are;

It hath a tubulous anomalous personated Flower, consisting of one Leaf, which is divided into two Lips: the upper Lip is again divided into two Parts, but the under Lip is divided into three. From the Flower-cup, which is for the most part bifid, arises the Pointal, fixed like a Nail in the binder Part of the Flower; but is barren, for the

the Flower-cup rests on the Embryo, and is surrounded by another Cup as a Sheath, in which are many roundish and angular Seeds.

We have but one Sort of this Plant; (viz.)

MORINA Orientalis, carlinæ folio. Tourn. Cor. Eastern Morina, with a Leaf of the Carline Thistle.

This Plant was discovered by Dr. Tournefort in his Travels in the Levant, who gave it this Name in Honour to Dr. Morin a Physician at Paris.

This Plant is propagated by Seed, which should be sown soon after it is ripe in the Autumn, otherwise the Plants will not come up the following Summer; for I have several times observed, where the Seeds have been sown in the Spring, they have remain'd in the Ground fourteen or fifteen Months, before the Plants have appeared. These Seeds should be sown in the Places where the Plants are to remain, because they send forth tap Roots, which run very deep into the Ground; and when these are broken or injured in transplanting, the Plants seldom thrive after. They may be sown in open Beds or Borders of light fresh Earth, being careful to mark the Places, that the Ground may not be disturbed, for it frequently happens, that the Seeds do not come up the first Year, when they are sown in Autumn; but when they are sown in the Spring, they never come up the same Year. The Ground where the Seeds are sown, must be kept clear from Weeds, which is all that is necessary to be done until the Plants come up, when, if the Season should prove dry, it will be proper to refresh them two or three times a Week with Water; and where they come up too close together, they should be thinned so as to leave them near eighteen Inches apart; after which Time they will require no other Culture, but to keep them constantly clear from Weeds; and in the Spring, just before the Plants put out new Leaves, to stir the Ground gently between them, and lay a little fresh Earth over the Surface of the Bed, to encourage the Plants.

In Autumn these Plants decay to the Ground, and send forth new Leaves the following Spring; but it will be three Years from the Time of the Plants first coming up, to their Flowering; but after that Time, they will flower every Season, and the Roots will continue many Years, provided they are not disturbed. These Plants, when in Flower, make an agreeable Diversity, when mixed with other hardy flowering perennial Plants; and as they do not require much Care to cultivate them, so they deserve Room in every good Flower-garden.

MOSCHATELLINA, Tuberous Moschatel.

The Characters are;

It hath a Flower consisting of one Leaf, which is divided at the Brim into many Parts, from whose Cup arises the Pointal, fixed like a Nail in the Middle of the Flower, which afterward becomes a soft succulent Berry, in which are contained many flat Seeds.

We have but one Sort of this Plant; (viz.)

MOSCHATELLINA foliis fumaricæ bulbosæ. J. B. Moschatel with Leaves like those of the bulbous Fumitory.

This Plant grows wild in shady moist Places in several Parts of England; it flowers the latter End of March, or the Beginning of April, and the Leaves decay about the Middle of June, when the Roots may be taken up and transplanted. These should have a pretty strong Soil, and if they are planted under Thickets of Shrubs, they will thrive much better than in an open exposure. The Flowers are of a greenish white Colour, so are not very beautiful, but as the Plants will thrive under Trees, and require no Care in their Culture, so they may have a Place in Gardens for the sake of Variety.

MUNTINGIA.

The Characters are;

It hath a rose-shaped Flower, consisting of several Leaves, which are placed in a circular Order, from whose Cup arises the Pointal, which afterward becomes a globular soft fleshy umbilicated Fruit, in which are contained many small Seeds.

The Species are;

1. MUNTINGIA folio sericeo, molli fructu majori. Plum. Nov. Gen. Muntingia with a soft silky Leaf, and a larger Fruit.

2. MUNTINGIA folio ulmi aspero, fructu minimo glomerato. Plum. Nov. Gen. Muntingia with a rough Elm-leaf, and the least Fruit growing in Clusters.

3. MUNTINGIA folio corni, fructu minore. Plum. Nov. Gen. Muntingia with a cornel Leaf, and a lesser Fruit.

These Plants all of them grow in Jamaica, and several other Parts of America. They were discovered by Father Plumier, who gave them the Name from Dr. Muntingius, who was Professor of Botany at Groningen in Holland, so that we have no English Name for them.

They may be propagated by Seeds, which should be sown in Pots filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, where they should be duly watered, and in warm Weather the Glasses should be raised to admit fresh Air. These Seeds will often remain in the Ground a whole Year, before the Plants will appear; in which Case the Pots must be kept constantly clear from Weeds, and should remain in the Hot-bed till after Michaelmas, when they may be removed into the Stove, and plunged into the Bark-bed, between other Pots of tall Plants, under which they will stand very well, so may be crowded in, where Plants will not thrive. During the winter Season, the Pots should be now and then watered, when the Earth appears dry; and in the Beginning of March, the Pots should be removed out of the Stove, and placed into a fresh Bark-bed under Frames, which will bring up the Plants in a short time after.

When the Plants are come up about two Inches high, they should be carefully taken out of the Pots, and each planted into a separate small Pot filled with light rich Earth, and then plunged into the Hot-bed again, observing to

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to shade them from the Sun, until they have take new Root, after which time they should be duly watered, and in warm Weather must have a large Share of fresh Air. In this Hot-bed the Plants may remain until the Autumn, when the Nights begin to be cold, when they should be removed into the Stove, and plunged into the Bark-bed. During the Winter Season these Plants must be kept warm, (especially while they are young) and they must be frequently refreshed with Water; but it must not be given to them in large Quantities at this Season, lest it rot the tender Fibres of their Roots. It will be proper to continue these Plants in the Stove all the Year; but in warm Weather they should have a large Share of Air, and Plenty of Water; but as the Plants grow in Strength, so they will be more hardy, and may be more exposed in Summer, and in Winter will live in a dry Stove, if kept in a moderate Degree of Heat.

The first of these Plants riseth to the Height of thirty Feet or more in the Places of its natural Growth, and divides into many Branches at the Top; the Flowers are white, having several yellow Threads in each; the Fruit is about the Size of a Cherry, and shaped like a Pomegranate, and, when ripe, of a brown Colour.

The other two Sorts seldom grow above twelve or fourteen Feet high, and put out many Branches on their Sides. The Fruit of these are small, and of an orange Colour.

MURUCUIA.

The Characters are;

It hath a rose-shaped Flower, consisting of several Leaves, which are placed in a circular Order, which is inclosed in a many-leav'd Cup. The Middle of the Flower is occupied by a Tube, shaped like the Trunk of a Cone; out of which arises the Pointal, with the Embryo on the Top, on which rest three Clubs or Nails, and under them the Stamina. The Embryo afterward becomes a fleshy oval Fruit, having one Cell, which is filled with Seeds, which are covered with a Hood or Veil.

There is but one Species of MURUCUIA, which is;

MURUCUIA folio lunato. Inst. R. H. Murucua with a horned Leaf.

This Plant is very nearly allied to the Passion-flower, and is by some Authors ranged with them; but as it differs from them in the Structure of the Flower, having a large Trunk in the Centre of the Flower, which the Passion-flowers have not, so Dr. Tournefort has separated it from them, and applied this Name to it, which is the American Name given to several Sorts of Passion-flowers.

It grows in Jamaica, and several other Places in the hottest Parts of America, from whence the Seeds may be procured. These Seeds should be sown early in the Spring of the Year, on a moderate Hot-bed; and when the Plants are come up, they must be transplanted each into a separate small Pot, and plunged into a Hot-bed of Tanners-bark, and then managed in the same Manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for the tender Sorts of Passion-

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flowers, with which this Plant will thrive, and produce its beautiful Flowers every Year in Plenty.

MUSA, The Plantain-Tree.

To this Article must be added;

Since the Publication of the former Volume of the *Gardeners Dictionary*, there have been several of these Plants in Flower and Fruit, in several Parts of Europe. The first of these Kinds, which produced Fruit in England, was in the Garden of Sir Joseph Ayloffe, Bart. near Harrow. Which was of that Sort with longer Fruit, commonly called the Plantain-Tree. This Plant grew above twenty Feet high, and at fourteen Feet from the Surface of the Bark-bed, was produced the Bunch of Fruit from between the Leaves, which was about four Feet in Length, and weighed above forty Pounds. These Fruit grew to a large Size, and became of a pale yellow Colour in Autumn, which is the Sign of Ripeness; but it was an ill-flavoured Fruit, as I am informed it is in the native Places of its Growth.

Since this there have been some other of these Plants in Fruit in England; one was at Mr. Blackbourn's in Lancashire; and two Plants; one of each Kind hath produced Fruit in the Physic-garden at Chelsea. The most sure Method to have these Plants fruit in England, is, after they have grown for some Time in Pots, so as to have made good Roots, to shake them out of the Pots with the Ball of Earth to their Roots, and plant them into the Tan-bed in the Stove, observing to lay a little old Tan near their Roots, for their Fibres to strike into; and in few Months the Roots of these Plants will extend themselves many Feet each way in the Bark, and these Plants will thrive a great deal faster, than those which are confined in Pots or Tubs. When the Bark-bed wants to be renewed with fresh Tan, there should be great Care taken of the Roots of these Plants, not to cut or break them, as also to leave a large Quantity of the old Tan about them, because, if the new Tan is laid too near them, it will scorch their Roots, and injure them. These Plants must be plentifully supplied with Water, otherwise they will not thrive; in Winter they should be watered every other Day, giving at least a Gallon to each Plant; but in Summer they must be watered every Day, and double the Quantity given to them each time. If the Plants push out their Flower-stems in the Spring, there will be Hopes of their perfecting their Fruit; but when they come out late in the Year, the Plants will decay before the Fruit is ripe. The Stoves in which these Plants are placed, should be at least twenty-four Feet in Height; otherwise there will not be room for their Leaves to expand: for when the Plants are in Vigour, the Leaves are often eight Feet in Length, and near three Feet broad; so that if the Stems grow to be sixteen Feet, to the Division of the Leaves, if the House is not twenty-four Feet high, the Leaves will be cramp'd, which will retard the Growth of the Plants.

MYAGRUM,

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MYAGRUM, Gold of Pleasure.

The Characters are ;

It hath a Flower consisting of four Leaves, which are placed in form of a Cross, out of whose Cup arises the Pointal, which afterwards becomes a turbinate Fruit, having one Cell, in which are included an oblong Seed, and two empty Cells at the Point.

The Species are ;

1. MYAGRUM *monospermum latifolium*. C. B. P. Broad-leaved one-grained Gold of Pleasure.

2. MYAGRUM *monospermum minus*. C. B. P. Lesser one-grained Gold of Pleasure.

3. MYAGRUM *capitulis rotundis*. J. B. Round-podded Gold of Pleasure.

These are all of them annual Plants, which perish soon after their Seeds are ripe. They grow wild in the Corn-fields, in several Parts of Europe, where if the Seeds are permitted to scatter, the Plants will come up and thrive better than those which are sown with Care ; so that the best Way to continue these Species, is to let the Seeds fall in Autumn, or to sow them soon after they are ripe ; for when they are sown in the Spring, they very often miscarry. When the Plants are come up, they should be cleared from Weeds ; and where they are too close together, they should be thinned so as to leave them about eight or ten Inches asunder, which is all the Culture they require.

The Oil of these Seeds is much used in Germany, where the Inhabitants sow large Fields with the Seed. This Oil is frequently used in Medicine, but the poor People eat the Oil in Sallads and Sauces, and the Rich use the Oil for their Lamps ; but in England it is very rarely used either Way.

MYXA, The Sebesten.

The Characters are ;

It hath a rose-shaped Flower consisting of five Leaves. These grow in Bunches. At the Bottom of the Flower-cup is the Ovary, which afterward becomes a plum-shap'd Fruit, including a Nut, which has sometimes one, and at other times three Cells, in which is contain'd the Seed.

We have but one Species of this Plant in Europe, which is ;

MYXA. Dod. p. 806. The Sebesten Plum.

This Plant is very rare at present in Europe, being to be found in very few Gardens. It is propagated by Seeds, which do not ripen in Europe ; so the Seeds should be obtained from the East-Indies, which is the natural Country of their Growth ; but as the Passage is long from thence to Europe, so the Seeds seldom come good to England. Therefore they should be taken fresh from the Tree, and put into Tubs of Earth or Sand, and Care taken of them in their Passage, that the Salt-water do not come to them, nor Vermin destroy them. When they arrive, they should be taken out of the Tub, and planted in small Pots, filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing frequently to water the Earth, in order to forward the

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Vegetation of the Seed. When the Plants are come up about two Inches high, they should be each transplanted into a separate small Pot filled with light rich Earth, and then plunged into the Hot-bed again, observing to screen them from the Sun until they have taken new Root ; after which Time they must have a large Share of fresh Air in warm Weather, and should be frequently refreshed with Water. The Plants may remain in the Hot-bed till the Autumn, when they should be removed into the Stove ; and the first Year, being young, they should be kept pretty warm ; but as the Plants grow stronger, so they will bear to be used more hardily, tho' they should always be placed in a Stove in Winter, otherwise they will not thrive in this Country.

The Fruit of this Tree was formerly used in Medicine, but of late Years they have been neglected, so that they are rarely brought into England.

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NARCISSUS, The Daffodil.

To this Article must be added,

1. NARCISSUS *medic-purpureus*. Hort. Eyst. Single Daffodil, with a white Flower, and a purple Middle.

2. NARCISSUS *Constantinopolitanus polyanthos major, melino pleno flore*. H. R. Par. Greater many-flowered Daffodil of Constantinople, with double yellow Flowers.

3. NARCISSUS *Cyprius luteus polyanthos, flore pleno*. Lob. Adv. Many-flowered Daffodil of Cyprus, with double yellow Flowers, commonly called the Cyprus Narcissus.

4. NARCISSUS *Orientalis polyanthos, pleno flore, petalis exterioribus albis, interioribus luteis, odoratissimus*. Cleric. Sweet-scented Eastern Daffodil, with many double Flowers, whose outer Leaves are white, and the inner Leaves yellow.

5. NARCISSUS *niveus, calyce flavo, odoris fragrantissimi*. C. B. P. Snow-white Daffodil, with a yellow Cup, and of a fragrant Scent.

6. NARCISSUS *Orientalis polyanthos, floribus odoris fragrantissimi*. Cler. Many-flowered Eastern Daffodil, with snow white Flowers, and a very fragrant Odour.

7. NARCISSUS *Orientalis polyanthos major, flore flavescente stellato*. Greater many-flowered Eastern Daffodil, with a yellowish starry Flower.

8. NARCISSUS *Orientalis, polyanthos major, flore aureo calyce flavescente stellato*. Greater many-flowered Eastern Daffodil, with a golden Flower, having a pale yellow starry Cup.

9. NARCISSUS *albus, flore minore, jasmini odore*. C. B. P. White Daffodil, with a smaller Flower, smelling like Jasmine.

10. NARCISSUS *Orientalis polyanthos albus odoratus, calyce stellato*. Eastern many-flowered Daffodil, with white sweet-scented Flowers, having a starry Cup.

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11. *NARCISSUS Americanus angustifolius, croci flore.* *Houft.* Narrow-leaved *American Daffodil*, with a saffron-coloured Flower.

The first Sort here mentioned, is pretty common in many of the Gardens near *London*: this produces only one single white Flower on the Top of the Stalk, which turns on one Side, and has a purple Rim to the Cup in the Middle: it flowers the latter End of *April*, and the Beginning of *May*, and is very hardy.

The other Sorts have been lately introduced into the *English* Gardens, so are not at present very common; but as these are all of them very hardy Plants, and multiply pretty fast by Off-sets, so in few Years they will be in as great Plenty as any of the other Kinds.

The second, third, fourth, fifth, sixth and ninth Sorts, are extremely worth cultivating in every good Garden, for the sake of their beautiful sweet-smelling Flowers, which continue from the Middle of *March* to the End of *April*, unless the Season proves very hot. The ninth Sort produces often twenty Flowers on each Stalk, which are of a snow-white Colour, and smell exceedingly sweet.

All these Sorts may be propagated after the Manner as hath been directed in the former Volume of the *Gardeners Dictionary*; so I shall not repeat it in this Place.

The eleventh Sort was discovered by the late *Dr. William Houstoun* at *La Vera Cruz*, where it grew in great Plenty. This hath Leaves like those of the *Jonquil*, and there is but one Flower produced on each Stalk. It is propagated by Off-sets from the Roots, in the same Manner as the common *Narcissus*, but is very tender; so must be preserved in the Bark-stove, and treated after the same Manner as the tender Kinds of *Lilio-narcissus*, otherwise they will not thrive in this Country.

NERIUM, The Oleander, or Rose-bay.

The Characters are;

The Flowers are monopetalous and funnel-shaped, divided into five Segments at the Top; out of the Flower-cup arises the Pointal, which becomes a taper Fruit, or Pod, divided into two Cells by an intermediate Partition, and filled with flat Seeds, which have Down adhering to them.

The Species are;

1. *NERIUM floribus rubescentibus.* *C. B. P.* Oleander with red Flowers.

2. *NERIUM floribus albis.* *C. B. P.* Oleander with white Flowers.

3. *NERIUM Indicum angustifolium, floribus odoratis simplicibus.* *H. L.* Narrow-leaved *Indian Oleander*, with single sweet-scented Flowers.

4. *NERIUM Indicum latifolium, floribus odoratis plenis.* *H. L.* Broad-leaved *Indian Oleander*, with double sweet-scented Flowers.

5. *NERIUM Indicum, flore variegato odorato pleno.* *H. Amst.* *Indian Oleander*, with double sweet-scented variegated Flowers, commonly called *South-Sea Rose*.

6. *NERIUM floribus ex albo & roseo variegatis.* *T. Cor.* Oleander or *Rose-bay* with a white Flower striped with Red.

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7. *NERIUM Indicum latifolium, flore rubro majore.* Broad-leaved *Indian Oleander*, with a larger red Flower.

The first and second Sorts are very common in the *English* Gardens, where they are preserved in Pots or Tubs, and placed amongst *Myrtles*, *Oranges*, &c. in the *Green-house*: they are pretty hardy Plants, and only require to be sheltered from hard Frost; for in moderate Winters I have known them stand abroad in warm Borders, but in hard Frosts they are often destroyed, if exposed thereto.

These may be placed in Winter in an ordinary *Green-house* among *Bays*, &c. which require a great Share of free Air, and only want Protection from hard Frosts, where they will thrive better, than if placed in a warmer House, or kept too close in Winter. They are propagated from Suckers, which they send forth from their Roots in great Plenty, or by laying down their tender Branches, which will take Root in one Year: The Time for laying them down is in the Beginning of *April*, and the Year following the Layers should be taken off, when they should be planted into Pots filled with fresh rich Earth, observing to place them in the Shade, until they have taken Root; after which they may be exposed with *Myrtles*, *Geraniums*, &c. in some Place where they may be sheltered from strong Winds. During the summer Season they must be plentifully watered, otherwise they will make but poor Progress, and produce very few Flowers; but if they are constantly supplied with Water, they will make a fine Appearance during the Months of *July* and *August*, when they will be covered with Flowers. In Winter they must be frequently refreshed with Water, but it should not be given them in large Quantities at that Season.

The third, fourth, fifth and seventh Sorts are tenderer than the others; therefore require a warmer Situation in Winter, nor must they be exposed to the open Air in Summer; for if they are placed abroad, their Flowers will not open. So that in Winter they should be placed in a warm *Green-house*, and in Summer they should be removed into an airy Glass-case, where they may be defended from the Cold of the Nights; but in the Day-time they should have a large Share of free Air, observing to give them Plenty of Water, which will cause them to produce their Flowers large, and in great Quantities. These Plants are Natives of the *Spanish West-Indies*, from whence they were brought into the *English* Colonies in *America*, where they were planted for the Beauty of their Flowers; but since the Inhabitants have found they destroy their Cattle which have browsed on the Plants, they usually root them out near their Settlements.

These Sorts also flower in *July* and *August*, when they make a beautiful Appearance; for they produce their Flowers in very large Bunches, and the Flowers of the fourth and fifth Sorts are very large and double, and smell greatly like those of white Thorn, so that they deserve a Place in every good *Green-house*.

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These Plants may be propagated from Suckers or Layers, as the two former; but they do not produce Suckers in so great Plenty as those in this Country. They all grow naturally on the Sides of Rivers, and moist Places; so that they must have Plenty of Water.

The sixth Sort was discovered by Dr. *Tournefort* in the *Levant*. This is very rare at present in *Europe*, but is as hardy as the common Sort, and may be propagated in the same Manner.

The third Sort produces flesh-coloured Flowers, of the same Size and Shape as those of the common Sort; but have very a musky Scent, so that they perfume the House in which they are placed, when they are in Flower. The Flowers of this Kind will not open fair, if they are exposed in the open Air; so that they should be placed in a Stove or Glass-case in Summer, with the two double Kinds, and the seventh Kind, where they will make a beautiful Appearance, and continue a long time in Flower.

All the Sorts should be shifted every Spring, about the Beginning of *April*, when the Suckers, or Layers, which are rooted, must be taken off, and planted into Pots filled with light rich Earth. The Roots of the old Plants must be trimmed, and as much of the Earth taken from their Roots, as may be done without Injury to the Plants, and the Pots filled with fresh rich Earth, which will encourage the Plants to produce a great Number of Flowers.

NICOTIANA, Tobacco.

To this Article must be added;

1. *NICOTIANA major, foliis latissimis & rugosioribus, floribus rubicundis.* Greater Tobacco, with very broad and rough Leaves, and reddish Flowers, commonly called Oronoko.

2. *NICOTIANA major latifolia, floribus albis, vasculo brevi.* Martyn. Cent. 1. Greater broad-leaved Tobacco, with white Flowers, and a short Seed-vessel.

3. *NICOTIANA humilis, primulae veris folio.* Houst. Dwarf Tobacco, with a primrose Leaf.

4. *NICOTIANA minor, folio cordiformi, tubo floris praelongo.* Feuillée. Smaller Tobacco with a heart-shaped Leaf, and a Flower with a longer Tube.

The first of these Sorts is the most common in *England*, and is generally raised by the Gardeners near *London*, who supply the Markets with Pots of Plants to adorn Balconies and Shop-windows in the City. This Sort, when raised early in the Spring, and planted in a rich Soil, will grow to the Height of fifteen or sixteen Feet, provided the Plants are duly watered in dry Weather. This Kind is not so much cultivated in *Virginia*, as the common broad-leaved Sort, because it is a much stronger Tobacco, so is not esteemed by the *English*.

The second Sort of Tobacco was found growing wild in the Island of *Tobago*, by Mr. *Robert Millar*, Surgeon, who sent the Seeds into *Europe*, which have succeeded in several curious Gardens. This Sort produces broader and rounder Leaves, than the common Sort,

which are less veined, and very glutinous. The Plants usually grow about five Feet high, and the Flowers of this are white, in which it differs from all the other Sorts.

These two Sorts are both of them as hardy as the common broad-leaved Kind, and are propagated by Seeds in the same manner as hath been directed for that, in the former Volume of the *Gardeners Dictionary*; so I shall not repeat it in this Place.

The third Sort was discovered by the late Dr. *William Houstoun* at *La Vera Cruz*; from whence he sent the Seeds and dried Samples of the Plant. This Sort is very different from all the other Kinds in the Manner of its Growth: for the Leaves of this Plant grow in Tufts near the Ground; out of the Middle of these Leaves, arises the flower Stem, which is naked, having no Leaves upon it, to the Height of eighteen Inches or a little more, and divides into many small Branches, on which stand the Flowers on short Foot-stalks, which are of a greenish yellow Colour.

The fourth Sort was discovered by Father *Feuillee*, in the *Spanish West-Indies*. This Sort commonly grows between three and four Feet high, and divides into several small Branches; the Leaves of this Sort are shaped like a Heart, and the Flowers are of a greenish yellow Colour.

These two Sorts are somewhat tenderer than the former, so should be sown early in the Spring on a Hot-bed; and when the Plants come up, they should be transplanted on another moderate Hot-bed, where they must be duly watered, and should have a large Share of free Air in warm Weather; and when the Plants have obtained a good Share of Strength, they should be transplanted into separate Pots, and plunged into a moderate Hot-bed to bring them forward; about the Middle of *June* some of the Plants may be shaken out of the Pots, and planted into Beds of rich Earth; but it will be proper to keep two Plants of each Kind in Pots, which may be placed in the Stove, (in case the Season should prove bad) that they may ripen their Seeds, so that the Species may be preserved.

NISSOLIA, Grass-vetch.

To this Article must be added;

1. *NISSOLIA Orientalis, flore purpureo.* Tourn. Cor. Eastern Grass-vetch, with a purple Flower.

2. *NISSOLIA Americana procumbens, folio rotundo, flore luteo.* Houst. American trailing Vetch, with a round Leaf, and a yellow Flower.

The first of these Sorts was discovered by Dr. *Tournefort* in the *Levant*: this is a hardy Plant, and may be sown in the full Ground, and treated as the common Sort, but the second Sort is more tender. This was discovered by the late Dr. *William Houstoun*, near *La Vera Cruz*. The Seeds of this Plant should be sown on a moderate Hot-bed early in the Spring; and when the Plants are come up, they should be frequently refreshed with Water, and in warm Weather the Glasses of the Hot-bed should be raised a little every Day, to admit fresh Air to the Plants, which will cause them to grow strong,

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strong, and in about a Month's Time they will be fit to transplant; when they should be taken up carefully, and each planted into a small Pot filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun in the Heat of the Day, until they have taken new Root; after which Time they should have a large Share of Air in warm Weather, and be frequently refreshed with Water. The Plants may remain in the Hot-bed until the Autumn, when the Cold begins to come on; at which time they should be removed into the Stove, and plunged into the Bark-bed, where if they are carefully managed, they will live thro' the Winter, and flower early the following Summer, so will perfect their Seeds.

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OBELISCOTHECA; Dwarf American Sunflower, *vulgò*.

The Characters are;

It hath radiated Flowers, having many Florets, which are fertile, but the half Florets are barren: The Placenta is commonly conical, and filled with chaffy Empalements, which appear folded up; in each of which is an Ovary, which is shaped like an Obelisk reversed, having a hollow Base. These Parts are contained in one common Flower-cup, which is deeply cut into several Segments, and expands in form of a Star: to which may be added, The Leaves are placed alternately.

The Species are;

1. *OBELISCOTHECA integrifolia, radio aureo, umbone atro-rubente.* Hortb. Elth. Dwarf Sunflower, with intire Leaves, the Rays of the Flower of a Gold Colour, and a dark red Disk.

2. *OBELISCOTHECA doronici folio, radio purpureo, umbone atro-rubente.* Dwarf Sunflower, with Leaves like Leopards-bane, the Rays of the Flower purple, and a dark red Disk.

These Plants are both Natives of America; the first of them was brought from Virginia, and the other from Carolina. They may both be propagated by parting of their Roots in the Spring, planting the Heads into Pots filled with fresh rich Earth, placing them in an open Situation, where they may have the Benefit of Sun and Showers, in which Place they may remain during the summer Season; but in Winter they must be sheltered under a Frame, to protect them from severe Frost, observing to let them have as much free Air as possible in mild Weather. They must be frequently refreshed with Water, especially in Summer, when it should be given them in Plenty; but in Winter they must have it more sparingly. The first Sort increases pretty fast in England; whereby it is become pretty common, and is preserved for the sake of its Flowers, which are produced in Plenty, and

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are of long Duration, each Flower continuing in Beauty five or six Weeks; and these being succeeded by new Flowers, the Plants are commonly furnished with them four or five Months.

The second Sort is less common than the first, by reason of the few Off-sets it produces from the Side; and the Seeds rarely being perfected in Europe, the Plants cannot be greatly increased; therefore, if a Person could procure the Seeds of this Plant from Carolina, it would be the surest Method to obtain a Stock of the Plants. The Seeds of both these Plants should be sown on a moderate Hot-bed; and when the Plants are grown tolerably strong, they should be each planted into a separate Pot, and inured to the open Air by degrees; after which they must be treated as hath been directed for the old Plants.

OCHRUS, Winged Pea.

The Characters are;

It hath a papilionaceous Flower, out of whose Empalement rises the Pointal, which afterward becomes a Pod, for the most part round and cylindrical, filled with roundish Seeds. To these Notes must be added, That the Leaves are sometimes simple, and sometimes conjugated, ending in Tendrils.

The Species are;

1. *OCHRUS folio integro, capreolos emittente, semine subluteo.* C. B. P. Ochrus or Winged Pea, with an intire Leaf, sending forth Tendrils, and a yellowish Seed.

2. *OCHRUS folio integro, capreolos emittente, semine pullo.* C. B. P. Ochrus or Winged Pea, with an intire Leaf, sending forth Tendrils, and a brown Seed.

3. *OCHRUS folio integro, capreolos emittente, semine atro.* C. B. P. Ochrus or Winged Pea, with an intire Leaf, sending forth Tendrils, and a black Seed.

4. *OCHRUS folio diviso in capreolos abeunte.* Inst. R. H. Ochrus or Winged Pea, with a divided Leaf ending in Tendrils.

5. *OCHRUS Americanus tomentosus, floribus luteis.* Plum. Woolly Ochrus or Winged Pea of America, with yellow Flowers.

The three first Sorts are accidental Varieties, which differ in the Colour of their Flowers and Seeds, but in every other respect are the same, so that they may be deemed only feminal Variations. They are annual Plants, which must be sown in the Spring of the Year, on an open Border or Bed of light fresh Earth, allowing them the same Distance, as is usual for the middle Sort of Pease. So the better Way is to sow them in Drills about two Feet asunder; and when the Plants are come up, the Earth should be drawn to them, in the same Manner as is practised for Pease: and when the Plants begin to rise in Height, there should be some Sticks put down by them, to which they will fasten their Tendrils, whereby they will be supported from trailing on the Ground, for want of which, in bad Seasons, they do not ripen their Seeds kindly. The Ground between the Rows should always be kept clean from Weeds, which, if permitted to

to grow, will soon overbear the Plants, and destroy them. About the Middle of *June*, the Plants will flower, and their Seeds will ripen the Beginning of *August*.

These Plants grow wild in *Lombardy*, and in some Parts of *Spain*; but in *England* they are preserved in the Gardens of some Persons who are curious in Botany, for the sake of Variety. The Seeds of these have been eaten in Times when there has been a Scarcity of other Provision, by the poor Inhabitants where they naturally grow; but they are bitter, and hard of Digestion, and do not afford good Nourishment.

The fourth Sort was discovered by Dr. *Tournefort* in the *Levant*, from whence he sent the Seeds to the Royal Garden at *Paris*, where it flourished, and has since been distributed to several Persons who are curious in collecting of Plants. This is as hardy as the common Sort, so may be sown and treated after the same Manner.

The fifth Sort was discovered by Father *Plumier* in *America*, and since by the late Dr. *William Houstoun* at *Campechy*. The Seeds of this Sort must be sown on a Hot-bed early in the Spring, and when the Plants come up, they should be transplanted each into a separate Pot, and plunged into a moderate Hot-bed; where they should have a large Share of free Air in warm Weather, and must be frequently refreshed with Water. About the Beginning of *July* these Plants will flower, and their Seeds will ripen in Autumn.

OCYUM, Basil.

The Characters are;

It hath a labiated Flower, consisting of one Leaf, whose Crest (or upper Lip) is upright, roundish, notched, and larger than the Beard, (or lower Lip) which is generally curled, or gently cut. Out of the Flower-cup arises the Pointal, attended by four Embryo's, which afterwards become so many Seeds inclosed in a Husk, which was before the Flower-cup; this Husk is divided into two Lips, the upper one growing upright, and is split into two; but the under one is cut into several Parts.

The Species are;

1. OCYUM *vulgatius*. C. B. P. Common Basil.
2. OCYUM *vulgatius*, foliis ex nigro-virescentibus, flore albo. H. R. P. Common Basil, with dark-green Leaves, and white Flowers.
3. OCYUM *minus angustifolium*, foliis serratis. C. B. P. Lesser Basil, with narrow serrated Leaves.
4. OCYUM *minus angustifolium*, foliis bullatis. H. R. P. Lesser narrow-leaved Basil, with warted Leaves.
5. OCYUM *minimum*. C. B. P. The least Basil, commonly called *Busb-Basil*.
6. OCYUM *minimum*, foliis ex purpura nigricantibus. H. R. P. The least Basil, with dark-purple Leaves.
7. OCYUM *citri odore*. C. B. P. Basil with a citron Scent.
8. OCYUM *latifolium maculatum vel crispum*. C. B. P. Broad-leav'd Basil, with curled spotted Leaves.
9. OCYUM *foliorum fimbriis ad endiviam*

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accedentibus, maximum. H. L. The greatest Basil, with Leaves fringed like Endive.

10. OCYUM *foliis fimbriatis viridibus*. C. B. P. Basil with fringed green Leaves.

11. OCYUM *caryophyllatum maximum*. C. B. P. The greatest Basil, smelling like Cloves.

12. OCYUM *anisi odore*. C. B. P. Basil smelling like Anise.

13. OCYUM *minus angustifolium, foliis serratis*. C. B. P. The smaller narrow-leaved Basil, with sawed Leaves.

14. OCYUM *tricolor*. H. R. Par. Three-coloured Basil.

15. OCYUM *nigrum majus, acuto ruta odore*. H. L. Greater black Basil, with the quick Smell of Rue.

16. OCYUM *Campechianum odoratissimum*. Houst. The most sweet smelling Basil of *Campechy*.

These Plants being annual, are propagated from Seeds, which should be sown in *March*, upon a moderate Hot-bed; and when the Plants are come up, they should be transplanted into another moderate Hot-bed, observing to water and shade them until they have taken Root; after which they should have Plenty of Air in mild Weather, otherwise they will draw up very weak; you must also water them frequently, for they love Moisture. In *May* they should be taken up with a Ball of Earth to their Roots, and transplanted either into Pots or Borders, observing to shade them until they have taken Root; after which they will require no farther Care, but to clear them from Weeds, and refresh them with Water in dry Weather. Though these Plants are only propagated from Seeds, yet if you have any particular Sort which may arise from Seeds, which you are desirous to increase, you may take off Cuttings any time in *May*, and plant them on a moderate Hot-bed, observing to water and shade them for about ten Days; in which Time they will take Root, and in three Weeks Time will be fit to remove either into Pots or Borders, with the seedling Plants. In *August* these Plants will perfect their Seeds, when those Sorts which appear the most distinct, should have their Seeds preserved separate, for saving the following Spring.

The first Sort is what the College of Physicians have prescribed for medicinal Use; but the fifth Sort is most esteemed for its Beauty and Scent, by those who cultivate them to adorn their Gardens.

The Seeds of these Plants are usually brought from the *South of France*, or *Italy*, every Spring, because they seldom ripen their Seeds in this Country, in the open Air. But whoever is curious to preserve the Seeds of any of the Varieties, should place them into an airy Glass-case or Stove, in the Autumn when the Weather begins to be cold or wet; and by supplying them with Water, and letting them have free Air every Day in mild Weather, they will perfect their Seeds very well in this Country.

The sixteenth Sort is more tender than any of the other. This was discovered growing wild at *Campechy*, by the late Dr. *William Houstoun*, who sent the Seeds to *England*. This

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should

should be sown on a Hot-bed early in the Spring, and when the Plants are come up, they should be transplanted on another very temperate Hot-bed, to bring them forward; and when they have obtained Strength, they should be each transplanted into a separate Pot, and placed either in the Stove, or on a moderate Hot-bed, where they may have a large Share of Air in warm Weather; but by being sheltered from the Cold and Wet, the Plants will perfect their Seeds very well in England.

OLDENLANDIA.

The Characters are;

It hath a rose-shaped Flower, consisting of one Leaf, which is divided into four Parts almost to the Bottom, and rests on the Empalement; which Empalement afterward becomes an almost globular Fruit, having two Cells, which contain many small Seeds.

We have but one Species of this Plant, which is;

OLDENLANDIA humilis byssopi folia. Plum. Nov. Gen. Dwarf Oldenlandia, with a hyssop Leaf.

This Plant was discovered in America by Father Plumier, who gave this Name to it in Honour to Henry Bernard Oldenland a German, who was a Disciple of Dr. Herman at Leyden, and was a very curious Botanist.

The Seeds of this Plant were sent into England by Mr. Robert Millar, who gathered them in Jamaica. It is a low annual Plant, which seldom rises above three or four Inches high, and divides into many Branches, which spread near the Ground. These Branches are furnished with long narrow Leaves, which are placed by Pairs opposite to each other. From the Wings of the Leaves arises the Flower-stalk, which grow about an Inch or a little more in Length, and divides into three or four smaller Footstalks: on the Top of each of these, stands one small white Flower.

The Seeds of this Plant should be sown early in the Spring, on a Hot-bed; and when the Plants are come up, they should be transplanted on another Hot-bed, or into small Pots, and plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root; after which Time, they must have a large Share of free Air in warm Weather, and must be frequently refreshed with Water. With this Management the Plants will flower in June, and their Seeds will ripen soon after; so that the Seeds must be gathered from time to time as they ripen; for as the Branches grow larger, so there will be fresh Flowers produced until Autumn, when the Plants will perish: but if the Seeds are permitted to scatter in the Pots, the Plants will soon after appear, which will live thro' the Winter, provided they are placed in the Stove; so will flower early the following Spring.

ONAGRA; Tree Primrose, vulgò.

The Characters are;

It hath a Rose-flower, consisting generally of four Leaves, placed orbicularly, and resting on

the Empalement; out of whose upper Part (which is fistulous) rises the Pointal, the under Part turning to a Fruit which is cylindrical, gaping in four Parts, and divided into four Cells filled with Seeds, which are generally cornered, and adhere to the Placenta.

The Species are;

1. ONAGRA latifolia. Inst. R. H. Broad-leaved Tree-Primrose.

2. ONAGRA latifolia, flore dilutior. Inst. R. H. Broad-leaved Tree-Primrose, with paler yellow Flowers.

3. ONAGRA latifolia, floribus amplis. Inst. R. H. Broad-leaved Tree-Primrose, with ample Flowers.

4. ONAGRA angustifolia. Inst. R. H. Narrow-leaved Tree-Primrose.

5. ONAGRA angustifolia, caule rubro, flore minori. Inst. R. H. Narrow-leaved Tree-Primrose, with red Stalks, and a smaller Flower.

6. ONAGRA Americana, foliis persicariae amplioribus, parvo flore luteo. Plum. American Tree-Primrose, with ample arsmart Leaves, and a small yellow Flower.

7. ONAGRA Americana, foliis persicariae angustioribus, magno flore luteo. Plum. Cat. American Tree-Primrose, with narrower arsmart Leaves, and a large yellow Flower.

8. ONAGRA Americana frutescens, nerii folio, magno flore luteo. Plum. Cat. American Tree-Primrose, with an oleander Leaf, and a large yellow Flower.

9. ONAGRA Americana, folio betonicae, fructu hispido. Plum. Cat. American Tree-Primrose, with a betony Leaf, and a prickly Fruit.

10. ONAGRA laurifolia, flore amplo pentapetalo. Feuillée. Bay-leaved Tree-Primrose, with a large five-leaved Flower.

11. ONAGRA byssopifolia, flore amplo violaceo. Feuillée. Hyssop-leaved Tree-Primrose, with a large violet-coloured Flower.

12. ONAGRA linariae folio, magno flore purpureo. Feuillée. Tree-Primrose, with a Toad-flax Leaf, and a large purple Flower.

13. ONAGRA salicis angusto dentatoque folio, vulgo Mithon. Feuillée. Tree-Primrose with narrow indented willow Leaves, commonly called Mithon.

14. ONAGRA salicis angusto dentatoque folio, flore luteo, calyce praelongo. Feuillée. Tree-Primrose with narrow indented willow Leaves, a yellow Flower, and a longer Cup.

The first Sort is very common in most English Gardens, where, when it has been suffered to scatter its Seeds, it will come up and flourish without any Care, and many times becomes a troublesome Weed: this will thrive in the Smoak of London, so that it is a very proper Plant to adorn the City Gardens; for it continues in Flower from the Beginning of June until August, and sometimes in cold Seasons till near Michaelmas. The Flowers of this Plant do not open in the Middle of the Day, when the Weather is warm; but in the Evening, after the Sun is gone off, they open, and continue so, until the Sun comes on them the next Day; in cloudy Weather the Flowers will continue open all Day, or when the Plants grow in the Shade. This Manner of the Flower opening

opening in the Evening, has occasioned the Name of Night Primrose, by which some People call it. The four next mentioned are equally hardy, and will grow in almost any Soil or Situation. The Seeds of these Plants may be sown in *March*, in an open Situation; and when the Plants come up, they should be kept clean from Weeds; and where they come up too close, some of them should be pulled up, to allow Room for the others to grow. In this Place the Plants may remain till *Michaelmas*, when they should be transplanted where they are to remain for Flowering. These Plants produce a great Quantity of Seed, which, if permitted to scatter, will sufficiently stock the Garden with Plants; but the old Plants rarely continue after they have seeded.

Tho' these Plants will bear transplanting pretty well, if it be done at *Michaelmas*, yet it is the better Way to sow the Seeds, where the Plants are designed to remain for Flowering, because they generally have a downright Root, which is often cut or broken by transplanting; and then the Plants never thrive so well, nor continue so long in Flower, as those which remain undisturbed.

The sixth and seventh Sorts are much tenderer than the former, and require to be raised in a Hot-bed, where they must be treated as hath been directed for the *Balsamina* and *Amaranthus*'s; to which I refer the Reader, to avoid Repetition. These Plants should be kept in a Stove or Glass-case, where they should have a large Share of Air in warm Weather; but if they are exposed in the open Air, they seldom continue long in Beauty, and rarely perfect their Seeds in *England*.

The eighth Sort is hardy, and will do very well in the open Air, provided it is sown on a warm Soil, and in a sheltered Situation. The Seeds of this Kind, if permitted to scatter, will come up the following Spring, and require no farther Care, but to keep them clear from Weeds. If some of these Plants are planted in Pots, and sheltered in the Greenhouse in Winter, they will grow woody, and may be continued two Years or more. But as it is so hardy as to come up from the scattered Seeds, so few People care to have the Trouble of keeping the Plants over the Winter.

The ninth, tenth, eleventh, twelfth, thirteenth and fourteenth Sorts, are more tender: these should be raised on a Hot-bed, and managed as the sixth and seventh Sorts; by which Method good Seeds may be obtained, and the Kinds preserved.

The tenth Sort was found in the Plains of *Lima*, by Father *Feuillee*: this Sort was also found near *Panama* by Mr. *Robert Millar*, Surgeon, who sent the Seeds to *England*. The eleventh Sort was also found by Father *Feuillee* in *Chily*, as were the thirteenth and fourteenth Sorts, by the same Person. But the twelfth Sort he found by the River of *Plate*. This grows about a Foot high, and produces large purple Flowers. The eleventh Sort grows taller, and produces large violet-coloured Flowers, which renders them more valuable than the other Sorts.

OPHIOGLOSSUM, Adders-tongue!

The Characters are;

It hath no visible Flower, but the Seeds are produced on a Spike which resemble a Serpent's Tongue; which Seed is contained in many longitudinal Cells, which open, and cast forth the Seeds when ripe.

The Species are;

1. OPHIOGLOSSUM vulgatum. C. B. P. The common Adders-tongue.

2. OPHIOGLOSSUM anguloso folio. C. B. P. Adders-tongue, with an angular Leaf.

3. OPHIOGLOSSUM minus, subrotundo folio. C. B. P. Lesser Adders-tongue, with a roundish Leaf.

4. OPHIOGLOSSUM bilingue majus, folio acuto. Mentz. Pug. Greater Adders-tongue, with a pointed Leaf, and a double Tongue.

5. OPHIOGLOSSUM bilingue medium, folio obtuso. Mentz. Pug. Middle Adders-tongue, with a blunt Leaf, and a double Tongue.

6. OPHIOGLOSSUM bilingue minimum. Mentz. Pug. The least Adders-tongue, with a double Spike or Tongue.

7. OPHIOGLOSSUM palmatum. Plum. Handed Adders-tongue.

8. OPHIOGLOSSUM cordiforme & reticulatum. Plum. Heart-shaped and netted Adders-tongue.

The first Sort grows wild in moist Meadows in several Parts of *England*. This is directed to be used in Medicine, by the College of Physicians, in their Dispensatory; but is seldom to be found in Gardens, being very difficult to transplant, and will not live long, where the Grass doth not grow about it. The best Method to have it succeed, is, to dig up the Plants about the Beginning of *April*, with large Balls of Earth to them, being careful to dig so deep, as to get below their Roots; then plant these with the Turf about them, in a moist shady Place, where they will grow pretty well, and may continue for some Years.

The second and third Sorts grow wild in *Germany*, and on the *Alpes*, but are not to be found in *England*.

The fourth, fifth and sixth Sorts, are also Varieties which have been found in some Parts of *Europe*; but it is not certain whether they are distinct Species, or only Variations from the common Sort.

These are all as hardy as the common Sort; so, whenever they are found, may be transplanted and treated in the same Manner.

The seventh and eighth Sorts were discovered by Father *Plumier* in *America*. These grow in moist swampy Places in *Jamaica*, and several other Places in the warmer Parts of *America*; but are difficult to remove so as to have them grow in other Countries.

OPHRIS, Tway-blade.

The Characters are;

It hath a polypetalous anomalous Flower, consisting of six dissimilar Leaves, of which the five upper ones are so disposed, as to represent in some measure an Helmet, the under one being headed and shaped like a Man. The Empalement

ment becomes a Fruit, perforated with three Windows, to which adhere Valves, pregnant with very small Seeds like Dust.

The Species are;

1. *OPHRIS bifolia*. C. B. P. Common Tway-blade.
2. *OPHRIS bifolia bulbosa*. C. B. P. Bulbous rooted Tway-blade.
3. *OPHRIS palustris, radice repente*. Inst. R. H. Marsh Tway-blade, with a creeping Root.
4. *OPHRIS minima*. C. B. P. The least Tway-blade.

The first Sort is pretty common in moist Meadows, and in shady moist Woods, in diverse Parts of England: it flowers the latter End of May, and in the Beginning of June. This Plant may be transplanted into Gardens, if the Roots are taken up with a Ball of Earth, soon after the Leaves decay. These must be planted in a moist shady Border, where, if they are not disturbed, they will remain many Years, and require no other Care but to keep them clear from Weeds.

The second Sort doth not grow wild in England, but is frequently found in Germany, and on the Alps; this may be transplanted and managed as the former Sort.

The third Sort grows plentifully in several of the Northern Counties of England; and the fourth Sort grows in Cambridgeshire, in Hertfordshire and Kent. These two Sorts delight in cold moist Places, so are with great Difficulty preserved in Gardens.

OPUNTIA, The Indian Fig.

To this Article must be added;

1. *OPUNTIA maxima, folio oblongo-rotundo majore, spinulis obtusis mollibus & innocentibus obfiso, flore striis rubris variegato*. Sloan. Cat. The greatest Indian Fig, with greater oblong roundish Leaves, and small soft blunt Spines, with a Flower striped with Red.
2. *OPUNTIA major spinosa caulescens, flore minore rubro clauso, fructu parvo coccineo*. Houst. Greater stalky and prickly Indian Fig, with a smaller red Flower, which doth not expand, and a small scarlet Fruit.
3. *OPUNTIA caulescens, foliis amplissimis tenuibus compressis, spinis longissimis confertissimis, gracilibus & albicantibus armatis*. Houst. Stalky Indian Fig, with large narrow compressed Leaves, which are closely armed with very long slender white Spines.

The first Sort grows commonly to the Height of eight or nine Feet, has large Leaves, which are not prickly. The Flowers are striped with Red, and the Fruit is not so palatable as most of the other Sorts. This is by many supposed to be the Sort which the Cochineel feeds on; but the third Sort, mentioned in the former Volume of the *Gardeners Dictionary*, is what the late Dr. Houstoun brought from La Vera Cruz, with the Insects upon it. This Sort hath very large yellow Flowers, and the Fruit, when ripe, is of a fine purple Colour, and smooth, having no Spines on the Outside, which most of the other Sorts have.

The second Sort commonly grows to the Height of fifteen or sixteen Feet, and hath a

thick woody Stem. This grows very common on the Hills, and by the Road Sides, in most Places in Jamaica.

The third Sort was observed in great Plenty near the Head of Kingstown Harbour in Jamaica, by the late Dr. Houstoun, but without Flower or Fruit. This is by some Persons called Robinson Crusoe's Coat, but for what reason I cannot imagine.

These Sorts may be cultivated in the same Manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for the Sorts there enumerated; only observing to let these remain constantly in the Stove, otherwise they will not produce either Fruit or Flowers in this Country.

OREOSELINUM, Mountain Parsley.

The Characters are;

It hath a rose-shaped umbellated Flower, consisting of several Leaves, placed in a circular Order, resting on the Empalement, which afterward becomes a Fruit, composed of two Seeds, which are oval, plain, large-streaked and bordered, and sometimes cast off their Cover. To these Notes must be added, That the Leaves are like Parsley.

The Species are;

1. *OREOSELINUM apii folio, majus*. Inst. R. H. Greater Mountain Parsley, with a parsley Leaf.
2. *OREOSELINUM apii folio, minus*. Inst. R. H. Smaller Mountain Parsley, with a parsley Leaf.
3. *OREOSELINUM pratense, cicutæ folio*. Inst. R. H. Meadow Mountain Parsley, with a hemlock Leaf.
4. *OREOSELINUM Orientale, seseleos Massiliensis folio*. Tourn. Cor. Eastern Mountain Parsley, with a Leaf like the Hartwort of Marseilles.

The first and second Sorts grow in the mountainous Pastures, and Vineyards on the Rhine in Germany, as also on the Hills in the Neighbourhood of Geneva.

The third Sort grows in the Meadows, and low Pastures, in several Parts of Germany, but particularly in the Palatinate.

The fourth Sort was discovered by Dr. Tournefort in the Levant, from whence he sent the Seeds to the Royal Garden at Paris.

The Seeds and Roots of the two first Sorts are commonly used in Medicine by the Physicians of Germany, but are never prescribed in England. They are esteemed cleansing and opening, and very good for the Stone and Gravel. From some Species of this Genus, Dr. Boerhaave conjectures that some of the Gums of Asia and Africa are produced: as the Ammoniac, Sagapenum, Opopanax, and Galbanum.

These Plants are propagated by Seeds, which should be sown in Autumn, as soon as possible after they are ripe; for if they are kept out of the Ground until the Spring, they seldom grow. These Seeds should be sown in the Places where they are designed to remain; for as they have downright carrotty Roots, so they do not bear transplanting well. They require a moist light Soil, and thrive best in a shady

shady Situation. The best Method is, to sow the Seeds in Rills, which should be made about eighteen Inches asunder, and about half an Inch deep. In the Spring, when the Plants come up, they should be carefully cleared of Weeds; and where the Plants are too close, they should be thinned, leaving them about six or seven Inches apart, that they may have room to grow; but the first Sort should be allowed a greater Share of Room, because it grows very large, often rising to the Height of six or seven Feet, and spreads its Leaves near two Feet each way.

In two Years after the Seeds are sown, the Plants (if they have thriven well) will be strong enough to produce their Flower-stems, when they will begin to shoot up in April, and their Flowers will appear in June, but their Seeds will not ripen till the End of August or September. These Plants will continue some Years, and will annually produce Seeds; so the Ground should be carefully dug between the Plants every Spring, and constantly kept clean from Weeds, which is all the Culture the Plants will require.

ORNITHOGALUM, Star of Bethlehem.

To this Article must be added;

1. ORNITHOGALUM *angustifolium spicatum maximum*. C. B. P. The greatest narrow-leaved spiked Star of Bethlehem.

2. ORNITHOGALUM *spicatum seu comosum, flore lacteo*. C. B. P. Spiked or branchy Star of Bethlehem, with a milk-white Flower.

3. ORNITHOGALUM *majus spicatum alterum*. C. B. P. Another great spiked Star of Bethlehem, commonly called the Star of Constantinople.

4. ORNITHOGALUM *spicatum, flore viridi lactescente*. C. B. P. Spiked Star of Bethlehem, with a whitish green Flower.

5. ORNITHOGALUM *spicatum album*. C. B. P. White spiked Star of Bethlehem.

6. ORNITHOGALUM *luteum sive pallidum majus*. C. B. P. Greater yellow or pale Star of Bethlehem.

7. ORNITHOGALUM *luteum, magno flore*. C. B. P. Yellow Star of Bethlehem, with a large Flower.

8. ORNITHOGALUM *luteum minus*. C. B. P. Smaller yellow Star of Bethlehem.

9. ORNITHOGALUM *Lusitanicum, capillaceo folio, luteum*. Inst. R. H. Yellow Portuguese Star of Bethlehem, with a capillaceous Leaf.

10. ORNITHOGALUM *spicatum unifolium, flore niveo odorato*. Vir. Lusit. Spiked Star of Bethlehem, with one Leaf, and a sweet-smelling snowy Flower.

11. ORNITHOGALUM *umbellatum maximum*. C. B. P. The greatest umbellated Star of Bethlehem, commonly called the Star of Alexandria.

12. ORNITHOGALUM *umbellatum majus angustifolium*. C. B. P. Greater narrow-leaved Star of Bethlehem, with umbellated Flowers.

13. ORNITHOGALUM *umbellatum album medium latifolium*. C. B. P. White middle Broad-leaved umbellated Star of Bethlehem.

14. ORNITHOGALUM *album minus*. C. B. P. Smaller white Star of Bethlehem.

15. ORNITHOGALUM *umbellatum, flosculis ex albo subcaeruleis*. C. B. P. Umbellated Star of Bethlehem, with whitish blue Flowers.

16. ORNITHOGALUM *latifolium & maximum*. C. B. P. The greatest broad-leaved Star of Bethlehem.

17. ORNITHOGALUM *latifolium alterum*. C. B. P. Another broad-leaved Star of Bethlehem.

18. ORNITHOGALUM *Oriente villosum, flore luteo magno*. Tour. Cor. Eastern hairy Star of Bethlehem, with a large yellow Flower.

19. ORNITHOGALUM *Samium villosum umbellatum album*. Tour. Cor. Hairy white umbellated Star of Bethlehem of Samos.

20. ORNITHOGALUM *Africanum luteum odoratum, foliis cepaceis, radice tuberoso*. H. L. Yellow sweet-smelling African Star of Bethlehem, with onion Leaves, and a tuberoso Root.

The ten Sorts first-mentioned are all of them very hardy, and may be propagated by Off-sets, which are sent out from their Roots in great Plenty. They grow wild in Spain, Portugal and Italy, from whence their Roots have been obtained by those Persons who are curious in collecting of Flowers.

The five following Sorts are also very hardy, and may be treated as the former; these produce their Flowers in form of an Umbrella, on the Top of their Stalks, whereas the other Sorts grow on Spikes. They are all of them very pretty Flowers, and are proper to adorn the open Borders of the Flower-garden, because they require very little Care to preserve them, and make an agreeable Variety, when they are intermixed with other hardy Flowers.

The first, second and third Sorts, which are mentioned in the former Volume of the *Gardeners Dictionary*, grow wild in several Places in the North of England, from whence their Roots may be procured. These will thrive very well in shady Borders, and do require a pretty strong Soil, in which they will flower much stronger, than when they are planted in a rich warm Soil.

The seventh Sort, mentioned in the former Volume of the *Dictionary*, is the least to be valued of all the Kinds; for the Flowers are large, and have no Beauty; and so soon as the Seed-vessels begin to swell, their Weight breaks down the Stalks; so that where they are not supported with Sticks, they fall to the Ground, and make a bad Appearance. This Sort sends forth such Numbers of Off-sets, that when it hath been a very few Years an Inhabitant in any Garden, it will be very difficult to root out again, so that it should never have room in the Borders amongst other valuable Flowers. *Clusius*, in his History of Plants, says, he never saw one of them in Flower, unless the Root was brought fresh from Constantinople; for he observes, that unless the Root have conceived a Flower in the Womb, they will never produce any, when they are transplanted to colder Countries.

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The eleventh Sort here mentioned is very common in many Gardens near *London*, but it rarely produces any Flowers. This multiplies very fast by Off-sets, so as in few Years to stock a whole Garden. The Leaves and Bulbs of this Plant are very like to those of the Hyacinth of *Peru*, so that many Persons have taken it for one of that Kind. These Roots have been brought over from *Italy* in great Plenty of late Years, by the Persons who import Orange-trees; but I have not yet heard that any of them have produced Flowers in *England*.

The sixteenth, seventeenth, eighteenth and nineteenth Sorts, are as yet very rare in *England*: these grow in the *Archipelago*; and I have been informed by a very curious Gentleman, that they grow in great Plenty in the *Island* of *Zant*, from whence their Roots may be easily obtained, by the Ships that bring over the Currans. The best Method to bring them over, would be to have the Roots taken out of the Ground, soon after their Flower-stems and Leaves decay, and dry them in a shady Place. Then they may be hung up in the Ship, in Nets, (as is practised for Onions) to prevent their rotting by Moisture, and to secure them from Vermin: and if they are four Months or longer out of the Ground, they will do very well, provided the Roots are sound.

All these Sorts may be cultivated by Seeds, by which Method there may be some new Varieties obtained; but there are very few Persons who are curious to propagate them this way, because they multiply so fast by Off-sets. But whoever is willing to try this Method, they may follow the Directions given for raising *Narcissus*'s, which is exhibited in the former Volume of the Dictionary.

The twentieth Sort was formerly more common in the *English* Gardens than at present. This Kind is more tender than either of the former; so should be planted in Pots filled with fresh light Earth, and in Winter must be placed in an airy Glass-case, amongst *Sedums*, *Ficoides*'s, and such other pretty hardy succulent Plants, which require a large Share of Air in mild Weather; and in Summer they may be removed out of the House, and placed in a warm sheltered Situation; observing never to give these Plants much Water when they are not in a growing State, lest it rot their Roots; but when they are growing freely, they must be frequently refreshed with Water. These Roots should be transplanted every Year; the best Time to perform this Work, is soon after their Flower-stems are decayed, when the Roots will be in the most inactive State. When this is done, the Off-sets should be carefully taken off, and each transplanted into a separate small Pot filled with light fresh Earth, and may be treated as the old Roots.

OROBUS, Bitter-vetch.

To this Article must be added;

1. OROBUS *sylvestris angustifolius*, aspho-

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deli radice. C. B. P. Narrow-leaved wild Bitter-vetch, with an asphodel Root.

2. OROBUS *sylvaticus, foliis nervosis*. *Inst.* R. H. Wild or wood Bitter-vetch, with Leaves full of Nerves.

3. OROBUS *Creticus latifolius incanus*. *Inst.* R. H. Broad-leaved hoary Bitter-vetch of *Candy*.

4. OROBUS *Orientalis latifolius villosus, flore croceo*. *Tourn. Cor.* Broad-leaved hairy Eastern Bitter-vetch, with a saffron-coloured Flower.

5. OROBUS *Americanus, fructu coccineo, nigra macula notato*. *Inst.* R. H. American Bitter-vetch, with scarlet Fruit, mark'd with a black Spot, commonly called wild Liquorice by the Inhabitants of *America*.

6. OROBUS *Americanus erectus, foliorum pinis angustis & subtus incanis, siliquis glabris*. *Houft.* Upright American Bitter-vetch, with narrow Leaves, which are hoary underneath, and smooth Pods.

7. OROBUS *Americanus latifolius argenteus, flore purpureo*. *Houft.* Broad-leaved silvery American Bitter-vetch, with a purple Flower.

8. OROBUS *Americanus procumbens & bifidus, flore purpureo*. *Houft.* Trailing hairy American Bitter-vetch, with a purple Flower.

9. OROBUS *Americanus procumbens minimus angustifolius, flore coccineo*. *Houft.* The least narrow-leaved trailing Bitter-vetch of *America*, with a scarlet Flower.

The four Sorts first-mentioned are very hardy Plants: these may be propagated by sowing of their Seeds in the Spring, on a Border of fresh Earth, exposed only to the Morning Sun; and when the Plants come up, they should be carefully cleared from Weeds, and thinned where they are too close. The *Michaelmas* following, they should be taken up and transplanted where they are designed to remain, which should be in a shady Place, or under Trees in wilderness Quarters, where these Plants will thrive exceeding well, and when they flower in the Spring, will make an agreeable Variety, in such Places where better Plants will not live, which renders them worthy of a Place in large Gardens.

The fifth Sort is very common in the warmest Parts of *America*, *Asia*, and *Africa*. The Seeds of this Sort are frequently brought to *England* from the *West-Indies* for their Beauty; being round and hard, and of a bright scarlet Colour, with a black Eye, and are somewhat less than Peas. These Seeds are by the Inhabitants of the Countries, where they naturally grow, strung, and wore about their Necks for Ornament. And the Leaves of the Plant are sometimes used instead of Liquorice, being esteemed good for the dry Gripes.

This Plant twists itself round whatever Trees or Shrubs grow near it, and will rise to the Height of ten or twelve Feet, and will continue several Years. The Flowers are produced on slender Foot-stalks, growing in a close Spike or Bunch, which are shaped like those of the Kidney-bean, and are of a pale purple Colour; these are succeeded by short thick Pods, in which are contained the Seeds.

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The sixth Sort was discovered by the late Dr. Houftoun in *Jamaica*, and the seventh, eighth and ninth Sorts, were discovered by the same Gentleman, at *La Vera Cruz* in the *Spanish West-Indies*. These five last-mentioned Sorts, being Natives of warm Countries, are very tender; so must be preserved in Stoves, otherwise they will not live in *England*. These are propagated by Seeds, which should be sown early in the Spring, in small Pots, filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing frequently to moisten the Earth, otherwise the Seeds will not grow (especially those of the fifth Sort, which are very hard, and will sometimes remain a whole Season in the Ground, where they are kept dry). When the Plants come up, they should be carefully taken out of the Pots, and each transplanted into separate small Pots, filled with rich Earth, and then plunged again into the Tan-bed, observing to shade them until they have taken Root; after which Time they should have fresh Air admitted to them every Day in warm Weather, and must be frequently watered. With this Management the Plants will make a great Progress, and in a few Weeks those of the fifth Sort will reach the Glasses of the Hot-bed, unless the Frame be very high; so these should then be taken out, and plunged into the Bark-bed in the Stove, where they may have room to grow. These Plants should be supported by Sticks, or placed near a Trellase, to which they should be fastened, otherwise they will trail about whatever Plants grow near them.

The other Sorts being of humbler Growth, may be kept in the Hot-bed until *Michaelmas*, when the Nights begin to be cold; at which Time they should be removed into the Stove, and plunged into the Bark-bed, where they must be treated as other tender exotic Plants; by which Method they may be preserved thro' the Winter, and the following Summer they will produce Flowers. These Plants are perennial, so that if they should not perfect their Seeds, the Plants may be maintained for several Years.

OSMUNDA, The Osmund Royal, or flowering Fern.

This is one of the Kinds of Fern which is distinguished from the other Sorts, by its producing Flowers on the Top of the Leaves, whereas the others for the most part produce them on the Back of their Leaves.

There is but one Kind of this Plant, which grows wild in *England*; but there are several Sorts of them which grow in *America*; but as they are seldom kept in Gardens, so I shall not enumerate their *Species*.

The common Sort grows on Bogs in several Parts of *England*; so whoever hath an Inclination to transplant it into Gardens, should place it in a moist shady Situation, otherwise it will not thrive.

OXYS; Wood-sorrel.

The Characters are;

It hath a bell-shaped Flower, consisting of one

Leaf, having its Brim wide expanded, and cut into several Divisions: the Pointal, which rises from the Flower-cup, becomes an oblong, membranous Fruit, divided into five seminal Cells, opening outward from the Base to the Top, and inclosing Seeds which start from their Lodges, by reason of the elastic Force of the Membrane which involves them.

The Species are;

1. *Oxys flore albo*. Tourn. Common Wood-sorrel, with a white Flower.

2. *Oxys flore purpurascens*. Tourn. Wood-sorrel, with a purplish Flower.

3. *Oxys lutea*. J. B. Wood-sorrel with a yellow Flower.

4. *Oxys lutea Americana erectior*. Tourn. Upright yellow Wood-sorrel of *America*.

5. *Oxys bulbosa Africana rotundifolia, caulibus & floribus purpureis amplis*. Hort. Amst. Round-leaved African Wood-sorrel, with large purple Flowers.

6. *Oxys bulbosa Aethiopica minor, folio cordato, flore ex albido purpurascens*. Hort. Amst.

7. *Oxys Americana, flore rubro, fibrosa radice*. Inst. R. H. American Wood-sorrel, with a red Flower, and a fibrous Root.

8. *Oxys lutea frutescens Americana, trifolii bituminosi facie*. Plum. Cat. Yellow shrubby American Wood-sorrel, with the Face of stinking Trefoil.

9. *Oxys purpurea Virginiana, radice squamata*. Inst. R. H. Purple Wood-sorrel of *Virginia*, with a scaly Root.

10. *Oxys bulbosa Africana rotundifolia, caulibus virentibus, floribus amplis purpureis*. Breyn. Cent. Bulbous-rooted African Wood-sorrel, with round Leaves, green Stalks, and large purple Flowers.

11. *Oxys lutea annua, floribus dentatis*. Feuillée. Obs. Yellow annual Wood-sorrel, with indented Flowers.

12. *Oxys roseo flore, erectior, vulgo Cullè*. Feuillée. Obs. Upright Wood-sorrel, with a rose-coloured Flower, vulgarly called Cullè.

13. *Oxys amplissimo flore luteo*. Feuillée Obs. Wood-sorrel, with the largest yellow Flower.

14. *Oxys luteo flore, radice crassissima*. Feuillée. Obs. Wood-sorrel with yellow Flowers, and a very thick Root.

The first Sort grows wild in Woods, and other shady Places, in divers Parts of *England*, and flowers in *April* and *May*. This is the Sort which is directed by the College of Physicians of *London* to be used in Medicine; but the Markets are generally supplied with the fourth Sort, which is not near so good, having very little Taste: but the People who cultivate medicinal Plants for the Market, have propagated this Plant in their Gardens, because it grows tall, and branches out greatly; so that they can readily gather and tie it up in Bunches for Sale: whereas the true Sort grows close to the Ground, and each Leaf rises with a Footstalk from the Root, which renders it troublesome to gather in Quantities; but those who use it in Medicine should be careful to have the true Sort; the Time for which is always in the Spring, whereas the other Kind

is never brought to Market till the Middle of the Summer.

The second Sort is a Variety of the first, differing only in the Colour of the Flower. This is found wild in the North of *England*, and is preserved as a Variety by those Persons who are curious in Botany; but there is no Difference in the Taste of this from the common Sort. These two Sorts are abiding Plants, and multiply greatly by their creeping Roots, as also by Seeds. They should be planted in a moist shady Border, either early in the Spring or at *Michaelmas*, that they may be rooted before the Frost comes on. When the Plants are once established in the Border, they will scatter their Seeds, and increase greatly. This common Wood-sorrel is a much more grateful Acid in Sallads, than the common Sorrel; for which Purpose a Border of it should not be wanting in the Kitchen-garden.

The third Sort is an abiding Plant, and increases greatly by its trailing Branches, which put out Roots at every Joint; as also by its Seeds, which are cast abroad when ripe by the Elasticity of the Vessels in which they are contained, which renders it difficult to save the Seeds; for when they are ripe, on the first Touch, the Pods burst, and throw out the Seeds. This is tender, and must be sheltered under a Frame in Winter; otherwise it will not abide the Frosts, when they are very severe.

The fourth Sort is an annual Plant. This was originally brought from *North-America*; but where-ever it is introduced, and permitted to scatter its Seeds, it will maintain itself without any further Care, it being a very hardy Plant; and is now become more common than our own Sort in the *London* Markets.

The fifth and sixth Sorts are preserved in some curious Gardens for Variety. The fifth Sort produces large purple Flowers, which make a very pretty Appearance, and continue in Beauty a long time, which renders it worthy of a Place in every Collection of Plants. The sixth Sort hath not much Beauty in its Flowers, but is planted in curious Gardens for Variety. These two Sorts have bulbous Roots, which increase pretty fast, (especially the sixth) by which they are easily propagated. These must be planted in Pots filled with fresh light Earth; and in Winter they should be placed under a common Hot-bed Frame, where they should have as much free Air as possible in mild Weather; but they must be sheltered from Frost, otherwise they will not live in this Country. In Summer they must be exposed in a shady Situation, and in dry Weather must be often refreshed with Water.

The seventh, ninth, and tenth Sorts may be treated in the same Manner as the former; these are preserved in curious Gardens for the sake of Variety.

The eighth Sort was discovered by Father Plumier in some of the *French* Settlements in *America*; it was also found by the late Dr. *Houftoun* near *La Vera Cruz*, where it was growing in great Plenty. This Sort rises to the Height of two Feet or more, and becomes

a little Shrub, but it hath little Acidity in the Leaves. This is tenderer than either of the former Sorts, so should be kept warmer in Winter, otherwise it will not live in this Country.

The eleventh Sort is an annual Plant, which is cultivated in all the Gardens of *Lima* and *Peru* in the *Spanish West-Indies*, for its grateful acid Taste, it being much used by the Inhabitants of those Places in all their Sauces. This Sort grows larger than the common upright *American* Kind; the Flowers are yellow edged with purple.

The twelfth Sort grows plentifully in *Cbillye* in the *Spanish West-Indies*. It hath beautiful rose-coloured Flowers, and grows about the same Height as the common upright *American* Sort.

The thirteenth Sort seldom rises above two Inches high, and doth not branch as do the former Kinds; this hath very large yellow Flowers: it grows plentifully on the Borders of the River of *Plate*.

The fourteenth Sort hath very large thick Roots, out of which come up the Leaves, which are of a bright green Colour on their upper Side, and of a violet Colour underneath. This grows on all the Mountains of *Peru*.

All these Sorts, being Natives of warm Countries, are somewhat tenderer than those before-mentioned, so must be placed in a warm Green-house in Winter; but in Summer they may be exposed to the open Air, and must be plentifully watered in dry Weather. These Plants will all of them produce Seeds in this Country, by which they may be propagated.

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PÆONIA, Piony.

To this Article must be added;

1. PÆONIA *mas, foliorum segmentis amplioribus*. C. B. P. Male Piony, with Leaves having broader Segments.

2. PÆONIA *tenuius laciniata, subtus pubescens, flore purpureo*. C. B. P. Piony with narrow jagged Leaves, which are downy underneath, and a purple Flower.

3. PÆONIA *aquilinae foliis*. C. B. P. Piony with a columbine Leaf.

4. PÆONIA *flore variegato*. C. B. P.

5. PÆONIA *folio subtus incano, flore albo vel pallido*. C. B. P. Piony with Leaves hoary underneath, and white or pale Flowers.

These Sorts are all of them as hardy as those mentioned in the former Volume of the *Gardeners Dictionary*, and may be propagated in the same Manner as is there directed, so I shall not repeat it here.

PALMA

PALMA, The Palm-tree.

To this Article must be added ;

1. PALMA *cujus fructus sessilis Faufel dicitur.*
C.B. P. The Palm-tree whose Fruit is called
Faufel.

2. PALMA *altissima non spinosa, fructu oblongo.*
Houft. The tallest smooth Palm-tree, with
oblong Fruit, called Mountain Cabbage.

3. PALMA *coccifera, complicato folio, fructu minore.* H. L. The nut-bearing Palm, with
a folded Leaf, and smaller Fruit.

4. PALMA *Malabarica, flosculis stellatis, fructu longo squammato.* Plum. Palm-tree of
Malabar, with small starry Flowers, and a long
scaly Fruit.

5. PALMA *dactylifera, fructu acerrimo.* Plum.
Date-bearing Palm-tree, with a sharp Fruit.

6. PALMA *montana Malabarica, folio magno complicato acuto, flore albo racemoso, fructu rotundo.* Plum. Mountain Palm-tree of Ma-
labar, with a large sharp folded Leaf, white
Flowers growing in Bunches, and a round
Fruit.

7. PALMA *prunifera Japonensis.* H. L. B.
Plum-bearing Palm of Japan.

8. PALMA *dactylifera & vinifera.* Plum.
Date and wine-bearing Palm-tree.

9. PALMA *dactylifera aculeata minima.* Plum.
The least prickly date-bearing Palm-tree.

10. PALMA *coccifera, costarum lateribus aculeatis.* Plum. Nut-bearing Palm-tree, with
Spines growing on the Stalks.

11. PALMA *dactylifera latifolia.* Plum. Broad-
leaved date-bearing Palm-tree.

12. PALMA *Indica coccifera angulosa.* C. B. P.
The Cocoa Nut vulgô.

The first Sort here mentioned is a Native of the *East-Indies*: the Fruit of this Kind is directed by the College of Physicians to be used in Medicine, but it is rarely brought to England. The second Sort was discovered by the late Dr. *Houftoun*, growing on the Hills near *La Vera Cruz*; the Fruit of this Kind is about an Inch and half in Length, and near two Inches in Circumference. The Flower-buds, which are produced in the Centre of the Plants, are by the Natives cut, and boiled to eat with their Meat, and are by them called the Mountain Cabbage.

The third Sort grows plentifully in several Parts of the *Spanish West-Indies*, from whence I have received the Fruit. These Fruit are shaped exactly like the Cocoa-nut, and are inclosed in a Shell in the same Manner as that; but these are not so large as a Man's Fist, whereas the Cocoa-nuts are larger than a Man's Head.

The fifth, sixth, eighth, ninth, tenth and eleventh Sorts, grow in several Places in the *East and West-Indies*; for by several Writers they are mentioned to grow in the *East*, and I have received Fruit of all these Sorts from the *West-Indies*.

The seventh Sort is a Native of the *East-Indies*, from whence the Fruit have been brought to England; but I have not heard that this Kind grows in any Part of *America*. This is one of the most beautiful Plants, of all the Kind of Palms, and deserves a Place

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in every good Stove. It is also of quicker Growth than most of the other Sorts; for I have known a Plant of this Kind, rise to have a fine Stem, in eight or nine Years from the sowing; whereas some of the other Kinds will not form a Stem in twenty Years.

These Sorts may be all propagated by their Fruit, which should be put into Pots early in the Spring of the Year, and plunged into a Hot-bed of Tanners-bark; and when the Plants are come up, they should be treated in the same Manner as hath been directed in the former Volume of the *Gardeners Dictionary*, wherefore I shall not repeat here. But must take notice, that some of these Sorts, whose Fruit have hard Shells, will remain in the Ground a whole Year before the Plants will come up, so that the Fruit should not be thrown out of the Pots, unless they are rotten.

The Cocoa-nut is cultivated in most of the inhabited Parts of the *East and West-Indies*, but is supposed a Native of the *Maldives*, and the desert Islands of the *East-Indies*: From whence it is supposed it hath been transported to all the warm Parts of *America*; for it is not found in any of the inland Parts, nor any-where far distant from Settlements. It is one of the most useful Trees to the Inhabitant of *America*, who have many of their common Necessaries of Life from it. The Bark of the Nut is made into Cordage, the Shell of the Nut into Drinking-bowls; the Kernel of the Nut affords them a wholesome Food, and the Milk contained in the Shell, a cooling Liquor. The Leaves of the Trees are used for thatching their Houses, and are also wrought into Baskets, and most other Things which are made of Osiers in *Europe*.

This Tree is propagated by planting of the Nuts, which in six Weeks or two Months after planting will come up, provided they are fresh, and thoroughly ripe, which is what few of them are, which are brought to England; for they always gather them before they are ripe, that they may keep during their Passage. So that the best Way to bring the Nuts to England for Planting, would be to take such of them as are fully ripe, and put them up in dry Sand in a Tub, where the Vermin may not come to them; and these will often sprout in their Passage, which will be an Advantage, because then they may be immediately planted in Pots of Earth, and plunged into the Bark-bed.

These Plants in the hot Islands of *America* make considerable Progress in their Growth; in which Places there are some Trees of very great Magnitude: but in *Europe*, this Plant is of much slower Growth, being many Years before it advances to any considerable Height; but as the young Leaves of these Plants are pretty large, so they make a good Appearance amongst other tender exotic Plants, in one or two Years time. This Plant is preserved in some curious Gardens in England, for Variety, where it must be placed in the Bark-stove, and managed as hath been directed for the other Kinds of Palms; observing, as often as they are transplanted, not to cut their strong Roots, which is generally Death to most of

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the Palm-kind. These Plants must not be too much confined in their Roots; for if they are, they will make but little Progress: therefore, when the young Plants have filled the Pots with their Roots, they should be shifted into Tubs of a moderate Size, that their Roots may have Room to extend; but these Tubs must be kept constantly plunged into the Bark-bed, otherwise the Plants will not thrive. The Method of raising these Plants from the Nuts, when they are planted before they have sprouted, is fully described under the Article of raising exotic Seeds, in the former Volume of the *Gardeners Dictionary*, to which the Reader is desired to turn, to avoid Repetition.

All the Sorts of Palm-trees are Male and Female in different Trees, and it hath been always supposed necessary, that the two should grow near each other, that the Male-tree might impregnate the Female, in order to render the Female fruitful; and where it has so happened that a Female Tree grew singly, it has been asserted that the Inhabitants have carried Branches of the Male-flowers, taken from Trees which grew at a Distance, and have fastened them to the Female Trees, without which they have insisted, that the Female Trees would not produce any Fruit. But this is refuted by Father *Labat*, who affirms that he knew a single Tree of the date-bearing Palm, which grew by the Side of an antient Convent in *Martinico*, which produced a large Quantity of fair Fruit annually; tho' there was not any other Palm-tree, which grew within two Leagues of this: but he also affirms, that the Stones of these Dates would not grow; for they had planted many of them for several Years successively, without ever raising a single Plant; and were afterwards obliged to procure some Dates from *Barbary*, in order to propagate them. So that he conjectures, that all the Female Trees may produce Fruit, which may appear very fair to the Eye; but upon Examination, they will be found to want the Germ or Bud, which is the Embryo of the future Plant.

This may account for the Fruit of the different Sorts of Palms not growing when they are brought to *England*; for if they are gathered from a Tree growing singly, having no Male Tree near it to impregnate the Ovary, it may be the true Cause why they do not succeed. Therefore those Persons who collect these Fruit to propagate them, should always observe to take them from such Trees, as grow in the Neighbourhood of the Male.

PANCRATIUM, Sea-daffodil.

The Characters are;

It hath a tubulous lily-shaped Flower, consisting of one Leaf, which is deeply cut into six Parts; in the Middle is a Cup, which is bell-shaped and six-cornered, having a Chive proceeding from each Corner, and is joined thereto as a Part of the Cup, being of the same Colour at Bottom; but the Part immediately under the Apex is green: in the Centre rises the Pointal, which extends beyond the Chives. The Empale-

ment afterwards becomes a roundish Fruit, which is triangular, and divided into three Parts containing many flat or roundish Seeds.

The Species are:

1. *PANCRATIUM Monspesulanum, multis Scilla alba parva. J. B.* Sea-daffodil of *Montpelier*, by many called the lesser white Squill.

2. *PANCRATIUM floribus rubris. Lob. Pan.* Sea-daffodil with red Flowers.

3. *PANCRATIUM Illyricum, floribus albis.* Sea-daffodil of *Illyricum*, commonly called the third *Narcissus* of *Matthiolum*.

4. *PANCRATIUM Americanum, floribus niveis, odore balsami Peruviani.* American Sea-daffodil, with snowy Flowers, smelling like the Balsam of *Peru*.

5. *PANCRATIUM Americanum, foliis latissimis, floribus niveis majoribus, odore balsami Peruviani.* American Sea-daffodil, with very broad Leaves, and large snowy Flowers, smelling like the Balsam of *Peru*.

6. *PANCRATIUM alterum vernum Indicum. J. B.* Another Indian Sea-daffodil of the Spring.

7. *PANCRATIUM Zeylanicum, flore albo odorato.* Sea-daffodil of *Ceylon*, with white sweet-smelling Flowers.

The first Sort is very common on the Seacoasts of the *Mediterranean*, where it grows in the Sands. The second is a Variety of the first, differing only in the Colour of its Flower. The third Sort grows plentifully on the Sands near *Naples*, and in *Sicily*, as also in several Islands of the *Archipelago*, but particularly in *Zant*, where all the Ditches are stored with it.

These Plants are very hardy in respect to Cold, and may be propagated by Off-sets from the Roots; for tho' they produce ripe Seeds in *England*, yet as the seedling Plants are many Years before they come to flower, so they are seldom propagated that Way. These Roots should be transplanted in *July*, after the Leaves and Flower-stems are decayed; they should be planted in an East-border, where they will thrive very well, and continue longer in Flower, than when they are more exposed to the Sun: but in every other respect they may be treated as hath been directed for the better Sort of *Narcissus*.

The other four Sorts are very tender, and will not live in *England*, unless they are preserved in the warmest Stoves. These may be procured from the Countries of their natural Growth, from whence their Bulbs may be easily brought, if they are taken out of the Ground when their Leaves begin to decay; and after drying them in the Shade, they should be put up in Nets or Bags, and hung up, that the Vermin may not come to them.

The fourth Sort is very common in *Jamaica*, and most of the Islands of *America*: the fifth Sort was brought from the *Bahama-Islands*, the sixth is very common in the *Spanish West-Indies*, and the seventh is a Native of the Island of *Ceylon*.

All these Plants increase by Off-sets from their Roots, and flower extremely well, if they are planted in Pots filled with light rich Earth,

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Earth, and plunged into the Bark-bed in the Stove, and managed as hath been directed for the tender Sorts of Lilio-Narcissus.

PANICUM, Panic.

The Characters are;

It is a Plant of the millet Kind, differing from that, by the Disposition of the Flowers and Seeds, which, of this, grow in a close thick Spike.

The Species are;

1. PANICUM Germanicum, five paniculâ minore flavâ. C. B. P. Yellow German Panic, with a smaller Spike.

2. PANICUM Germanicum, five paniculâ minore albâ. C. B. P. White German Panic, with a smaller Spike.

3. PANICUM Germanicum, five paniculâ minore purpureâ. C. B. P. Purple German Panic with a smaller Spike.

4. PANICUM Italicum, five paniculâ majore. C. B. P. Italian Panic, with a larger Spike.

5. PANICUM Indicum, spicâ obtusâ cœruleâ. C. B. P. Indian Panic, with a blue obtuse Spike.

6. PANICUM Indicum, spicâ longissimâ. C. B. P. Indian Panic, with a very long Spike.

7. PANICUM Americanum, spicâ obtusâ brevi. Inst. R. H. American Panic, with a short obtuse Spike.

8. PANICUM Americanum, spicâ longiore acutâ. Inst. R. H. American Panic, with a longer pointed Spike.

9. PANICUM Indicum altissimum, spicis simplicibus, mollibus, in foliorum alis longissimis pediculis insidentibus. Inst. R. H. The tallest Indian Panic, with a soft single Spike, which is produced on a long Foot-stalk from the Wing of the Leaf.

The three first Sorts are only Varieties, which differ in the Colour of the Grain. These are sowed in several Parts of Europe, in the Fields, as Corn, for the Sustenance of the Inhabitants; but it is reckoned not to afford so good Nourishment as Millet; however it is frequently used in some Parts of Germany, to make Puddings, Cakes and Bread. This is not so much esteemed as the Italian Sort; but as it will ripen better in cold Countries than that, so it is generally cultivated, where a better Sort of Grain will not succeed.

The Seeds of these Sorts may be sown in the Spring, at the same Time as Barley is sown, and may be managed exactly in the same Way: but this should not be sown too thick; for these Seeds are very small, and the Plants grow stronger, therefore require more Room. The German Sort doth not grow above three Feet high, unless it is sown on very rich Land, in which Case it will rise to be four Feet high; but the Leaves and Stems of this Corn are very large, so require to stand four or five Inches apart, otherwise they will grow up weak, and come to little. These large growing Corns should be sown in Drills at about eighteen Inches apart, so that the Ground may be houghed between the Rows of Corn, to keep them clear from Weeds, and the stirring of the Ground will

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greatly improve the Corn. In July the Corn will ripen, when it may be cut down and dried, and then should be housed.

The Italian Panic grows much larger than the German, and produces much larger Spikes; so this should be allowed more Room to grow, otherwise it will come to little. This is also later before it ripens, so is not very proper for cold Countries.

The other Sorts are Natives of very warm Countries, where they are used by the Inhabitants to make Bread. These grow very large, and require a good Summer, otherwise they will not ripen in this Country. The Seeds of these Kinds should be sown the latter End of March, or the Beginning of April, on a Bed of light rich Earth, in a warm Situation. They should be sown in Drills about three Feet asunder, and when the Plants come up, they must be kept clear from Weeds, and thinned where they are too close. When the Plants are grown pretty tall, they should be supported by Stakes, otherwise the Winds will break them down; and when the Corn begins to ripen, the Birds must be kept from it, otherwise they will soon destroy it. These Sorts are preserved in some curious Gardens for the sake of Variety, but they are not worth cultivating for Use in England.

PARKINSONIA.

The Characters are;

It hath a polypetalous anomalous Flower, consisting of five dissimilar Leaves, from whose Cup arises the Pointal, which afterward becomes a rough jointed Point, each Knot or Joint containing one kidney-shaped Seed.

We know but one Species of this Plant, which is;

PARKINSONIA aculeata, foliis minutis, uni costæ adnexis. Plum. Nov. Gen. Prickly Parkinsonia, with very small Leaves, fastened to one Middle Rib.

This Plant was discovered by Father Plumier in America, who gave it this Name in Honour to the Memory of Mr. John Parkinson, who published a universal History of Plants in English, in the Year 1640.

It is very common in the Spanish West-Indies, but of late Years it has been introduced into the English Settlements in America, for the Beauty and Sweetness of its Flowers. This in the Countries where it grows, naturally rises to be a Tree of twenty Feet high or more, and bears long slender Bunches of yellow Flowers, which hang down after the same Manner as the Laburnum. These Flowers have a most agreeable sweet Scent, so as to perfume the Air to a considerable Distance round about the Trees; for which Reason the Inhabitants of the West-Indies plant them near their Habitations. And tho' this Plant has not been introduced many Years into the English Settlements, yet it is now become so common in all the Islands, that but few Houses are without some of the Trees near it; for it produces Flowers and Seeds in Plenty, in about two Years, from Seed; so that it may soon be made common in all hot Countries: but in Europe

Europe it requires a Stove, otherwise it will not live thro' the Winter.

This Plant is propagated by Seeds, which should be sown in small Pots filled with light fresh Earth early in the Spring, and the Pots must be plunged into a Hot-bed of Tanners-bark, where, in about three Weeks or a Month's Time, the Plants will come up; when they should be kept clear from Weeds, and frequently refreshed with Water. In a little Time these Plants will be fit to transplant; which should be done very carefully, so as not to injure their Roots. They must be each planted into a separate half-penny Pot filled with light fresh Earth, and then plunged into the Hot-bed again, observing to stir up the Tan; and if it hath lost its Heat, there should be some fresh Tan added, to renew the Heat again. Then shade the Plants from the Heat of the Sun, until they have taken new Root; after which Time they should have fresh Air admitted to them every Day, in proportion to the Warmth of the Season, by raising of the Glasses of the Hot-bed with Bricks or Stones; and they must be constantly supplied with Water every other Day, in warm Weather. With this Management the Plants will grow so fast, as to fill the Pots with their Roots by the Beginning of July. At which Time they should be shifted into Pots a little larger than the former, and plunged again into the Bark-bed, provided the Plants are not too tall to remain under the Frame, without Danger of being scorched by the Glasses; in which Case they must be plunged into the Bark-bed in the Stove, where they may have Room to grow.

As these Plants are very tender, so they should be constantly kept in the Bark-stove, with other tender exotic Plants of the same Country, observing in the Winter Season to refresh them two or three times a Week with Water, but it should be given to them sparingly in cold Weather. In Summer they must be supplied more plentifully with Water, and should have a large Share of free Air in hot Weather. The Plants must also be shifted every Year, and as they grow in Magnitude, so they should be allowed larger Pots, being careful not to over-pot them; which is very injurious to most Plants, but especially to these very tender ones. If the Plants thrive, they will produce Flowers the third Year, when they will make a fine Appearance in the Stove.

PARNASSIA, Grass of Parnassus.

The Characters are;

It hath a rose-shaped Flower, consisting of five Leaves, at the bottom which are small, fringed, and noted leaves, of a greenish Colour, and placed orbicularly; out of the Flower-cup rises the Pointal, which afterward turns to a membranaceous Fruit, which is oval, having but one Cell, which is filled with Seeds, that for the most part adhere to a four-fold Placenta.

The Species are;

1. PARNASSIA palustris & vulgaris. Inst. R. H. Common Marsh-grass of Parnassus.
2. PARNASSIA vulgaris, flore pleno. Common Grass of Parnassus, with a double Flower.

The former of these Sorts grows wild in moist Meadows, in several Parts of England, but particularly in the North; but it doth not grow in the Neighbourhood of London, any nearer than on the other Side of Watford, in the low Meadows by Cassioberry, where it is in pretty great Plenty.

The other Sort is an accidental Variety of the former, which has been discovered wild, and transplanted into Gardens. This is but rarely to be found, being in very few Gardens at present.

These Plants may be taken up from the natural Places of their Growth, with Balls of Earth to their Roots, and planted into Pots filled with pretty strong fresh undunged Earth, and placed in a shady Situation, where, if they are constantly watered, they will thrive very well, and flower every Summer.* But if the Plants are planted in the full Ground, it should be in a very moist shady Border, otherwise they will not live; and these should be as duly watered, as those in the Pots in dry Weather, to make them produce strong Flowers.

They may be propagated by parting of their Roots, which should be done in March, before they put out new Leaves; but the Roots should not be divided too small, for that will prevent their Flowering the following Summer; these Roots should always be planted in pretty strong fresh Earth, for they will not thrive in a light rich Soil. In the Spring they must be constantly watered, if the Season should prove dry, otherwise they will not flower, nor should they be parted oftener than every other Year, to have them strong. These Plants flower in July, and their Seeds are ripe the latter End of August.

It is called *Parnassia*, from Mount Parnassus, on which it was supposed to grow; and from the Cattle feeding on it, it was called a Grass, tho' the Plant has no Resemblance to any of the Grass-kind, but is more like to the *Ranunculus* in Flower, and the Leaves are pretty broad, oblong and smooth.

PARONYCHIA, Mountain Knot-grass.

The Characters are;

It hath an apetalous Flower, consisting of several Chives, which rise from the Flower-cup, which is shaped like the Pelvis, and cut into five Parts for the most part like a Crown; the Pointal afterwards becomes a round Seed, wrapt up in a five-cornered Husk, which was before the Flower-cup.

The Species are;

1. PARONYCHIA Hispanica. Clus. Hist. Spanish Mountain Knot-grass.
2. PARONYCHIA Narbonensis erecta. Inst. R. H. Upright Mountain Knot-grass of Narbonne.
3. PARONYCHIA Hispanica supina Alsine folia, capitulis minus compactis. Inst. R. H. Low Spanish Mountain Knot-grass, with a chickweed Leaf, and the Heads less compact.
4. PARONYCHIA Hispanica fruticosa, myrti folio. Inst. R. H. Shrubby Spanish Mountain Knot-grass, with a myrtle Leaf.

5. PARONYCHIA

5. *PARONYCHIA Lusitanica, polygoni folio, capitulis echinatis.* Inst. R. H. Portugal Mountain Knot-grass, with prickly Heads.

6. *PARONYCHIA Orientalis bumifusa, serpilli folio.* Tourn. Cor. Dwarf Eastern Mountain Knot-grass, with a Mother of Thyme-leaf.

The five Sorts first mentioned grow wild in Spain, Portugal and the South of France, where they generally are found near the Sea, on the Sides of Banks; but the sixth Sort was discovered by Dr. Tournefort in the Levant. They are all (except the second and fourth Sorts) low Plants, which trail on the Ground, in the same Manner as our common Knot-grass, but continue several Years.

These Plants are preserved by those who are curious in Botany, for the sake of Variety; but are seldom admitted into other Gardens: tho' the first Sort may have Room in every good Garden, for the fine Appearance it makes in Autumn, when the silvery scaly Heads, which are produced at every Joint of the Branches, make a goodly Shew.

They may all be propagated by sowing of their Seeds on a Bed of light fresh Earth, in an open Situation, about the Middle or latter End of March; and when the Plants come up, they should be carefully weeded; and if the Season should prove dry, they must be now and then watered. When the Plants are large enough to transplant, they should be carefully taken up, and some of them planted in Pots, and the others on a warm Border, where they may be sheltered in Winter, otherwise they will not live in this Country. Those which are planted in Pots, should be placed under a Hot-bed Frame, where they may be screened from hard Frosts, but should have as much free Air as possible in mild Weather. With this Management the Plants may be preserved many Years, and will flower every Season; but they rarely produce any Seeds in this Country.

PARTHENIASTRUM, Bastard Feaverfew.

The Characters are;

It hath a radiated discous Flower, consisting of several Florets, which occupy the Disk, but are barren; the half Florets, which are shaped like a Heart, are succeeded by black Seeds, which are naked, having no Down adhering to them: to which may be added, The Flower-cup is simple, and cut into five Parts to the Bottom.

The Species are;

1. *PARTHENIASTRUM artemisiae folio, flore albo.* Acad. Reg. Scien. Bastard Feaverfew, with a mugwort Leaf, and a white Flower.

2. *PARTHENIASTRUM belenii folio.* Hort. Eltb. Bastard Feaverfew, with an elecampane Leaf.

The first Sort grows wild in great Plenty in the Island of Jamaica, and in some other of the English Settlements in the West-Indies, where it is called wild Worm wood, and is used by the Inhabitants as a vulnerary Herb.

The second Sort grows plentifully in several Parts of the Spanish West-Indies, from whence the Seeds have been brought to Europe.

These are both annual Plants, which may be propagated by sowing of their Seeds on a Hot-bed early in the Spring; and when the Plants are come up, they should be transplanted on another Hot-bed, at about five or six Inches Distance, observing to water and shade them until they have taken new Root; after which Time they must have a pretty large Share of fresh Air in warm Weather, by raising of the Glasses of the Hot-bed every Day; and they must be duly watered every other Day at least. When the Plants have grown so as to meet each other, they should be carefully taken up, preserving a Ball of Earth to their Roots, and each planted into a separate Pot, filled with light rich Earth; and if they are plunged into a moderate Hot-bed, it will greatly facilitate their taking fresh Root; but where this Conveniency is wanting, the Plants should be removed to a warm sheltered Situation, where they must be shaded from the Sun until they have taken new Root; after which time they may be exposed, with other tender annual Plants, in a warm Situation, where they will flower in July, and their Seeds will ripen in August. But if the Season should prove cold and wet, it will be proper to have a Plant or two in Shelter, either in the Stove, or under tall Frames, in order to have good Seeds, if those Plants which are exposed should fail, whereby the Species may be preserved.

PASTURE.

Pasture Ground is of two Sorts, the one is Low Meadow-land, which is often overflowed, and the other is Up-land Pasture, which lies high and dry. The first of these will produce a much greater Quantity of Hay than the latter, and will not require Manuring or Feeding so often: but then the Hay produced on the Up-land is much preferable to the other, as is also the Meat which is fed on the Up-land, more valued than that which is fatted in rich Meadows: tho' the latter will make the fatter and larger Cattle, as is seen by those which are brought from the low rich Lands of Lincolnshire. But where People are nice in their Meat, they will give a much larger Price for such as hath been fed on the Downs, or in short Up-land Pasture, than for the other, which is much larger. Besides this, dry Pastures have an Advantage over the Meadows, that they may be fed all the Winter, and are not so subject to poach in wet Weather; nor will there be so many bad Weeds produced, which are great Advantages, and do in a great measure recompense for the Smallness of the Crop.

I have already mentioned the Advantages of Meadow-land, or such as is capable of being overflowed with Water, and given Directions for draining and improving low Pasture-land, under the Article of Land; so shall not repeat that here, but shall just mention some Methods for improving of Up-land Pasture.

The first Improvement of Up-land Pasture, is by fencing of it, and dividing it into small Fields, of four, five, six, eight or ten Acres each, planting of Timber-trees in the Hedge-rows, which will screen the Grass from the drying

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drying pinching Winds of *March*, which prevents the Grass from growing in large open Lands; so that if *April* proves a dry Month, the Land produces very little Hay; whereas in the sheltered Fields, the Grass will begin to grow early in *March*, so will cover the Ground, and prevent the Sun from parching the Roots, of the Grass, whereby it will be kept growing so as to afford a tolerable Crop, if the Spring should prove dry. But in Fencing of Land, it must be observed (as was before directed) not to make the Inclosures too small, especially where the Hedge-rows are planted with Trees; because when the Trees are advanced to a considerable Height, they will spread over the Land; and where they are close, will render the Grass sour, so that, instead of being an Advantage, it will greatly injure the Pasture.

The next Improvement of Up-land Pastures, is to make the Turf good, where either from the Badness of the Soil, or for want of proper Care, the Grass hath been destroyed by Rushes, Bushes, or Mole-hills. Where the Surface of the Land is clayey and cold, it may be improved by paring of it off, and burning it in the Manner before directed; but if it is a hot sandy Land, then *Chalk*, *Lime*, *Marle* or *Clay*, are very proper Manures to lay upon it; but this should be laid in pretty good Quantities, otherwise it will be of little Service to the Land.

If the Ground is over-run with Bushes or Rushes, it will be a great Advantage to the Land, to grub them up toward the latter Part of the Summer; and after they are dried, to burn them, and spread the Ashes over the Ground just before the Autumnal Rains; at which time the Surface of the Land should be levelled, and sown with Grass-seed, which will come up in a short time, and make good Grass the following Spring. So also, where the Land is full of Mole-hills, these should be pared off, and either burnt for the Ashes, or spread immediately on the Ground, when they are pared off, observing also to sow the bare Patches with Grass-seed, just as the Autumnal Rains begin.

Where the Land has been thus managed, it will be of great Service to roll the Turf, in the Months of *February* and *March*, with a heavy Wood-roller, always observing to do it in moist Weather, that the Roll may make an Impression. This will render the Surface level, and make it much easier to mow the Grass, than when the Ground lies in Hills; and will also cause the Turf to thicken, so as to have what the People usually term a good Bottom. The Grass will also be the sweeter for this Husbandry, and it will be a great Help to destroy bad Weeds.

Another Improvement of Up-land Pastures, is the Feeding of them; for where this is not practised, the Land must be manured at least every third Year; and where a Farmer hath much arable Land in his Possession, he will not care to part with his Manure to the Pasture. Therefore every Farmer should endeavour to proportion his Pasture to his arable Land, especially where Manure is scarce, other-

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wise he will soon find his Error; for the Pasture is the Foundation of all the Profit, which may arise from the arable Land.

Whenever these Up-land Pastures are mended by Manure, there should be a Regard had to the Nature of the Soil, and a proper Sort of Manure applied: as for Instance, All hot sandy Lands should have a cool Manure; Neats-dung and Swines-dung, are very proper for such Lands: but for cold Lands, Horse-dung, Ashes, and other warm Manures are proper. And when these are applied, it should be done in Autumn, before the Rains have soaked the Ground, and rendered it too soft to cart on; and it should be carefully spread, breaking all the Clods as small as possible, and then harrowed with Bushes, to let it down to the Roots of the Grass. When the Manure is laid on at this Season, the Rains in Winter will wash down the Salts, so that the following Spring the Grass will receive the Advantage of it.

There should also be great Care had to the destroying of Weeds in the Pasture every Spring and Autumn; for where this is not practised, the Weeds will ripen their Seeds, which will spread over the Ground, and thereby fill it with such a Crop of Weeds, as will soon over-bear the Grass, and destroy it; and it will be very difficult to root them out, after they have gotten such Possession: especially Ragwort, and such other Weeds as have Down adhering to their Seeds.

These Up-land Pastures seldom degenerate the Grass which is sown on them, (if the Land is tolerably good) whereas the low Meadows which are overflowed in Winter, do in few Years turn to a harsh rushy Grass, tho' the Up-land will continue a fine sweet Grass for many Years without renewing.

The Grasses proper to sow on these Up-land Pastures, are, *Rye-grass*, *Clover*, *Trefoil*, *Nonfuch*, *Spurrey*, *St. Foyn* and *La Lucern*, The Manner of sowing and cultivating all these, is exhibited under their proper *Articles*.

PEDICULARIS, Rattle, Cocks-comb or Loufewort.

There are four different Kinds of this Plant, which grow wild in Pastures in several Parts of *England*, and in some low Meadows are very troublesome to the Pastures; especially one Sort with yellow Flowers, which rises to be a Foot high or more, and is often in such Plenty, as to be the most predominant Plant; but this is very bad Food for Cattle, and when it is mowed with the Grass for Hay, renders it of little Value. The Seeds of this Plant are generally ripe by the Time the Grass is mowed, so that whenever a Person takes Grass-seed for sowing, they should be very careful, that none of this Seed is mixed with it. As these Plants are never cultivated, so I shall not trouble the Reader with their several Varieties.

PELECINUS.

The Characters are;

It hath a papilionaceous (or pea-bloom) Flower, out of whose Empalement rises the Pointal,

Pointal, which afterward becomes a plain bicausal and bivalve Pod, indented on each Side like a Saw, and filled with plain kidney-shaped Seeds.

We know but one Species of this Plant; (viz.)

PELECINUS vulgaris. Inst. R. H. Common Pelecinus.

This Plant is preserved in Botanic Gardens, for the sake of Variety: it is an annual Plant, so the Seeds should be sown early in April, on a Bed of light fresh Earth, in Drills about eighteen Inches asunder; and when the Plants are come up, they should be carefully cleared from Weeds; and where they are too close, they should be thinned, leaving them six or eight Inches Distance in the Rows, and observe always to keep them clear from Weeds, which is all the Culture they require. These Plants spread on the Ground, and from the Wings of the upper Leaves; the Flowers are produced on slender Foot-stalks, which are small, and of a dirty red Colour; these are succeeded by Pods, which are flat, and indented on both Sides, resembling the Saw of the Saw-fish.

PERESKIA, Gooseberry *vulgô.*

The Characters are;

It hath a rose-shaped Flower consisting of several Leaves, which are placed orbicularly; whose Cup afterward becomes a soft fleshy globular Fruit, beset with Leaves; in the Middle of the Fruit, are many flat roundish Seeds, included in a Mucilage.

We know but one Species of this Plant; (viz.)

PERESKIA aculeata, flore albo, fructu flavescens. Plum. Nov. Gen. Prickly Pereskia, with a white Flower, and a yellowish Fruit.

This Plant grows in some Parts of the Spanish West-Indies, from whence it was brought to the English Settlements in America, where it is called a Gooseberry, and by the Dutch it is called Blad-Apple. This Plant hath many slender Branches, which will not support themselves, so must be supported by Stakes, otherwise they will trail on whatever Plants grow near them. These Branches, as also the Stem of the Plant, are beset with long whitish Spines, which are produced in Tufts. The Leaves are roundish, very thick and succulent, and the Fruit is about the Size of a Walnut, having Tufts of small Leaves on it, and hath a whitish mucilaginous Pulp.

It may be propagated by planting of the Cuttings during any of the summer Months: these Cuttings should be planted in Pots filled with fresh light Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun in the Heat of the Day, as also to refresh them every third or fourth Day with Water. In about two Months the Cuttings will have made good Roots, when they may be carefully taken out of the Pots, and each planted in a separate Pot filled with fresh Earth, and then plunged into the Hot-bed again, where they may remain during the

summer Season; but at Michaelmas, when the Nights begin to be cold, they should be removed into the Stove, and plunged into the Bark-bed. During the winter Season, the Plants must be kept warm, and should be watered twice a Week; but in cold Weather it should not be given to them in large Quantities. In Summer they must have a large Share of Air, and must be more plentifully watered; but they should constantly remain in the Stove; for tho' they will bear the open Air in Summer, in a warm Situation, yet they will make no Progress, if they are placed abroad; nor do they thrive near so well in the Dry-stove, as when they are plunged in the Tan: so that the best Way is to set them next a Trellice, at the Back of the Tan-bed, to which their Branches may be fastened, to prevent their trailing on other Plants. This Plant has not as yet produced either Flowers or Fruit in England; but as there are several Plants pretty well grown, in the Gardens of the Curious, so we may expect some of them will flower in a short Time.

PERICLYMENUM, Trumpet Honey-suckle.

To this Article must be added,

1. *PERICLYMENUM racemosum, flore flavescens, fructu niveo. Plum. Tab. Hort. Elth.* Branching Trumpet Honey-suckle, with a yellowish Flower, and a snowy Fruit, commonly called in Barbados, Snowberry-bush.

2. *PERICLYMENUM arborescens, ramulis inflexis, flore luteo. Plum. Cat.* Tree-like Trumpet Honey-suckle, with a yellow Flower.

3. *PERICLYMENUM aliud arborescens, ramulis inflexis, flore corallino. Plum. Cat.* Tree like Trumpet Honey-suckle, with a coralline Flower.

The first of these Plants is pretty common in Barbados and Jamaica, where the Inhabitants give it the Name of Snowberry-bush, from the extreme Whiteness of the Fruit. The second and third Sorts were discovered by Father Plumier in some of the French Settlements in America; and since by the late Dr. Houstoun at La Vera Cruz.

These are all of them very tender Plants, so must constantly remain in the Bark-stove, otherwise they will not thrive in this Country. They may be propagated by Seeds, which should be brought over either in Sand or Earth, otherwise they seldom succeed; when they arrive, the Tubs of Earth, in which the Seeds were sown, should be plunged into a Hot-bed of Tanners-bark, observing frequently to water them: and when the Plants are come up, they should be carefully transplanted into separate small Pots filled with rich fresh Earth, and plunged into the Hot-bed again; where they may remain till about Michaelmas, when they should be plunged into the Bark-bed in the Stove, and treated as other tender exotic Plants from the same Countries; and in two or three Years the Plants will flower, when they will make an agreeable Variety.

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PERIPLOCA, Virginian Silk, or Climbing Dogs-bane.

To this Article must be added;

1. *PERIPLOCA foliis oblongis angustioribus.* Inst. R. H. Longer and narrower-leaved Virginian Silk, or Climbing Dogs-bane.

2. *PERIPLOCA Monspeliaca, foliis acutioribus.* Inst. R. H. Climbing Dogs-bane of Montpellier, with sharp-pointed Leaves.

3. *PERIPLOCA Americana, fructu molliter echinato.* Inst. R. H. American Climbing Dogs-bane, with a prickly Fruit.

4. *PERIPLOCA Americana latifolia, siliqua dura oblonga, tumida & glabra.* Inst. R. H. Broad-leaved American climbing Dogs-bane, with a long hard smooth swelling Pod.

5. *PERIPLOCA Americana scandens, salicis angustissimo folio, flore albo.* Plum. Climbing American Dogs-bane, with a narrow willow Leaf, and a white Flower.

6. *PERIPLOCA Americana repens umbellata, foliis citri, flore coccineo.* Plum. Creeping American Dogs-bane, with a citron Leaf, and scarlet Flowers, growing in an Umbel.

7. *PERIPLOCA Americana scandens, folio citri, fructu maximo.* Plum. Climbing American Dogs-bane, with a citron Leaf, and a large Fruit.

8. *PERIPLOCA Americana scandens, folio convolvuli, fructu alato.* Plum. American climbing Dogs-bane, with a convolvulus Leaf, and a winged Fruit.

The first and second Sorts are hardy Plants, which will live in the open Air in this Country. These may be propagated by laying down of their Branches (for they very rarely produce good Seeds in England); these may be treated in the same Manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for the Sorts there enumerated.

The other seven Sorts are tender, being Natives of the warm Parts of America. The Seeds of all these Sorts were sent to England by the late Dr. Houstoun, who collected them in Jamaica, at Campechy, and Carthagena; where they grow in great Plenty, and twist themselves round whatever Trees grow near them, and some of them rise to the Height of forty or fifty Feet or more. Some of these Sorts produce very large warted Pods, which are full of oblong flat Seeds, to which is fastened a very long soft white Down, which helps to convey the Seeds to a great Distance when ripe. This Down, as also that of the *Apocynum*, have of late Years been used to stuff Pillows, Matresses and Quilts, for which Purposes there is nothing so proper; for it is so exceedingly light, that a Quilt of great Thickness is hardly to be felt, when spread over a Bed; which is of great Advantage to those Persons who are troubled with the Gout, and cannot bear any Weight on the Part affected. It hath also a very great Elasticity, so that it is not apt to stick together. This Down is called in French, *de la Wadde*, and is greatly in use amongst the Quality in France.

All these Plants may be propagated by Seeds, which should be sown on a Hot-bed

early in the Spring; and when the Plants are fit to transplant, they should be each planted into a separate Pot filled with fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun every Day, until they have taken new Root; after which Time, they should have a large Share of Air in warm Weather, and must have Plenty of Water. In about six Weeks or two Months after planting, the Plants will get up to reach the Glasses of the Hot-bed; when they should be shifted into larger Pots, and plunged into the Bark-bed in the Stove; where they must be supported by an Espalier, otherwise they will twist themselves round whatever Plants grow near them.

These Plants will bear the open Air in Summer, but they never make any Progress, when they are exposed, and rarely flower; therefore in order to have these Plants in Beauty, they should constantly remain in the Stove, and must have a large Share of free Air in mild Weather. When they are thus managed, they will rise to the Height of thirty Feet or more, and will produce Flowers every Summer.

PERSEA, The Avocado or Avogato Pear.

The Characters are;

It hath a rose-shaped Flower, consisting of several Leaves, which are ranged in a Circle; from whose Middle rises the Pointal, which afterwards becomes a soft fleshy pear-shaped Fruit, in which is a hard Stone or Seed, having two Lobes, which is included in a Membrane or Pericardium.

We know but one Species of this Plant; (viz.)

PERSEA. Clus. Hist. The Avocado or Avogato Pear.

This Tree grows in great Plenty in the Spanish West-Indies, as also in the Island of Jamaica, and hath been transplanted into most of the English Settlements in the West-Indies, on account of its Fruit, which is not only esteemed by the Inhabitants as a Fruit to be eaten by way of Desert, but is very necessary for the Support of Life. The Fruit is of itself very insipid, for which Reason they generally eat it with the Juice of Lemons and Sugar to give it a Piquancy. It is very nourishing, and is reckoned a great Incentive to Venery. Some People eat this Fruit with Vinegar and Pepper.

This Tree in the warm Countries, where it is planted, grows to the Height of thirty Feet or more, and has a Trunk as large as our common Apple-trees; the Bark is smooth, and of an Ash-colour. The Branches are beset with pretty large oblong smooth Leaves, which are of a deep green Colour, and continue on the Tree throughout the Year. The Flowers and Fruit are, for the most part, produced toward the Extremity of the Branches.

In Europe this Plant is preserved as a Curiosity, by those Persons who are skilful in collecting exotic Plants: and tho' there is little Hope of its producing Fruit, yet for the Beauty of its shining green Leaves, which continue thro' the Winter, it deserves a Place in every curious Collection of Plants.

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It is propagated by Seeds, which should be obtained as fresh as possible from the Countries of its Growth; and if they are brought over in Sand, they will be more likely to grow, than such as are brought over dry. These Nuts or Seeds should be planted in Pots, filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, which should be kept pretty warm, by covering of the Glasses of the Bed every Night with Mats or Straw, especially when the Nights are cold. The Pots should also be frequently watered, when the Earth appears dry, which will greatly facilitate the Vegetation of the Seed, provided the Water is not given in large Quantities, which would rot them. In about a Month or five Weeks the Plants will come up, when they must be treated very tenderly; for the Bed must be kept in a due Temperature for Heat; and when the Days prove warm, the fresh Air should be admitted to the Plants, by raising of the Glasses a little. The Plants must also be frequently watered. When the Plants have grown about four Inches high, they should be carefully transplanted; and where there are several Plants in one Pot, they must be parted, being careful to preserve a Ball of Earth to the Root of each, and planted into separate small Pots filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark; observing to shade them until they have taken new Root; after which Time they should have fresh Air admitted to them, in proportion to the Warmth of the Season, and they must be duly watered. Towards Michaelmas the Plants must be removed in to the Stove, and plunged into the Bark-bed, where, during the winter Season, they should be kept very warm, and must be gently watered twice a Week. In the Spring the Plants should be shifted into Pots a Size larger than the former, and the Bark-bed should be then renewed with fresh Tan, which will set the Plants in a growing State early, whereby they will make a fine Progress the following Summer. The Plants must be constantly kept in the Stove, for they are too tender to bear the open Air in this Country at any Season.

PETIVERIA, Guinea Henweed *vulgô*.

The Characters are;

It hath a Flower consisting of four Leaves, which are placed almost in the Form of a Cross, from whose Cup rises the Pointal, which afterward becomes the Fruit, which is bordered and cut at the Top, resembling an inverted Shield containing oblong Seeds.

We know but one Species of this Plant, (*viz.*)

PETIVERIA *solani foliis, loculis spinosis.* Plum. Nov. Gen. Petivertia with Nightshade Leaves, and prickly Seed-vessels, commonly called Guinea Henweed.

This Name was given to this Plant, by Father Plumier, who discovered it in America; in Honour to Mr. James Petiver an Apothecary, who was a curious Botanist.

It is a very common Plant in Jamaica, Barbados, and most of the other Islands in

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the West-Indies, where it grows in shady Woods, and all the Savannas, in such Plenty, as to become a very troublesome Weed; and as this Plant will endure a great deal of Drought, so it remains green, when other Plants are burnt up, which occasions the Cattle to brouze on it; and having a most unfavoury strong Scent, somewhat like wild Garlick, it gives the Cows Milk the same Flavour; and the Cattle which are killed soon after feeding on this Plant, have a most intolerable Scent, so that their Flesh is good for little.

In Europe this Plant is preserved in the Gardens of those Persons who are curious in Botany, but there is little Beauty in it; and having so strong rank a Scent upon being handled, renders it less valuable. It is propagated by Seeds, which must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate Pot, and plunged into a moderate Hot-bed to bring them forward. When the Plants have obtained a good Share of Strength, they should be inured to bear the open Air by degrees; into which they may be removed toward the latter End of June, placing them in a warm Situation, where they may remain till Autumn, when they should be removed into the Stove, and in Winter must have a moderate Degree of Warmth, otherwise they will not live in this Country.

These Plants will grow woody, and shoot out many Side-branches, but seldom rise above two Feet high. They will produce Flowers and Seeds every Summer, and will continue several Years, remaining constantly green throughout the Year.

PHILLYREA, Mock Privet.

To this Article must be added;

1. PHILLYREA *longiore folio, profunde crenato.* H. R. Par. Phillyrea with a longer Leaf, which is deeply crenated.

2. PHILLYREA *folio buxi.* H. R. Par. Box-leaved Phillyrea.

3. PHILLYREA *Hispanica, lauri folio serrato & aculeato.* Inst. R. H. Spanish Phillyrea, with a prickly and sawed Bay-leaf.

4. PHILLYREA *Hispanica, nerii folio.* Inst. R. H. Spanish Phillyrea with an oleander Leaf.

5. PHILLYREA *Capensis, folio celastri.* Hort. Eltb. Phillyrea of the Cape of Good Hope, with a Staff-tree Leaf, commonly called by the Dutch, Lippelbont.

6. PHILLYREA *Americana humilis, radice crassa lutea, foliis acuminatis.* Plum. Cat. Dwarf American Phillyrea, with a thick yellow Root, and pointed Leaves.

7. PHILLYREA *Americana humilis, radice crassa rosea, foliis rotundioribus.* Plum. Cat. Dwarf American Phillyrea, with a thick rose-coloured Root, and rounder Leaves.

The four Sorts first-mentioned are hardy Shrubs, which will thrive in the open Air in England. These may be propagated by laying down of their Branches, after the Manner exhibited in the former Volume of the Gardeners Dictionary for the common Sort,

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and

and may afterward be managed in the same Way.

The fifth Sort is very common in several Gardens in *Holland*, but is at present pretty rare in *England*. This Sort will not live abroad thro' the Winter in this Climate, so is always preserved in Pots or Tubs, and removed into the Green-house in Winter, where if it is treated after the Manner directed for the *Alaternoides*, in the former Volume of the *Dictionary*, they will thrive very well. This Sort is also propagated by laying down the tender Branches in the Spring of the Year, which must be duly watered in dry Weather; and by the following Spring they will have taken Root; when they should be separated from the old Plant, and planted in Pots filled with fresh Earth, and placed in the Shade until they have taken new Root; after which Time they may be exposed during the summer Season, with other pretty hardy exotic Plants, in a sheltered Situation, where they may remain till Autumn, when they must be removed into the Green-house. These Plants are ever-green, so that they make a pretty Variety in the Green-house, during the winter Season.

The sixth Sort grows plentifully in several Parts of the *Spanish West-Indies*: the Seeds of this Kind were sent to *England* by Mr. Robert Millar, who gathered them near *Carthage* in *America*. The seventh Sort was discovered by Father Plumier in *America*, and since by Mr. Millar in the Island of *Tabago*, from whence he sent some Seeds, but they did not succeed in *England*.

These two Sorts are tender Plants, which must be kept in a warm Stove in Winter, otherwise they will not live in this Country. They may be propagated by Seeds, which should be obtained as fresh as possible from the Countries of their Growth, and must be sown in Pots of fresh light Earth, and plunged into a Hot-bed of Tanners-bark; where they should remain until the Plants come up, which is many times a Year from the Time of sowing; so whenever the Seeds remain so long in the Ground, the Pots must be frequently watered in Summer, and in Winter the Glasses of the Hot-bed should be covered with Mats, when the Weather is cold, to prevent the Frost from entering of the Bed, which would destroy the Seeds.

When the Plants are come up, they should be each transplanted into a small Pot filled with fresh Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun in the Heat of the Day, until they have taken new Root; after which Time they must have free Air admitted to them every Day, in proportion to the Warmth of the Season, and should be constantly watered three or four times a Week in warm Weather. In this Bed the Plants may remain till Autumn, when they should be removed into the Stove, and plunged into the Bark-bed, where during the Winter Season they should be kept pretty warm, and must be frequently watered. These Plants may remain in the Bark-stove for two Years or less, according as they acquire

Strength; for when they are pretty strong, they may be treated less tenderly, exposing them in the middle of the Summer to the open Air, in a sheltered Situation; and in Winter they may be placed in a dry Stove, where they should have a moderate Degree of Warmth, in which they will thrive very well. These Plants retain their Verdure throughout the Year, for which they are chiefly esteemed.

PHLOMIS, *Jerusalem Sage*.

To this Article must be added;

1. PHLOMIS *fruticosa*, flore purpureo, foliis rotundioribus. *Inst. R. H.* Shrubby *Jerusalem Sage*, with a purple Flower, and rounder Leaves.

2. PHLOMIS *fruticosa Lusitanica*, flore purpureascente, foliis acutioribus. *Inst. R. H.* Shrubby *Jerusalem Sage* of *Portugal*, with a purplish Flower, and sharp-pointed Leaves.

3. PHLOMIS *Hispanica fruticosa candidissima*, flore ferrugineo. *Inst. R. H.* The whitest *Spanish shrub Jerusalem Sage*, with an iron-coloured Flower.

4. PHLOMIS *Orientalis lutea angustifolia*, cymis fulvescentibus, *D. Sberard. Act. Phil. N. 376*. Yellow Eastern *Jerusalem Sage*, with a narrow Leaf, and yellow Tops.

These four Plants grow to the Height of five or six Feet, and become shrubby: they are all of them pretty hardy, so will bear the Cold of our ordinary Winters in the open Air, provided they are planted on a dry Soil, and in a warm Situation: but as they are sometimes destroyed by severe Frosts, so it is proper to keep a Plant of each Sort in Pots, which may be removed into Shelter in the Winter, in order to preserve the Kinds. These may be placed with Bays, and other hardy Plants, which only require to be defended from very hard Frosts, but must have as much free Air as possible in mild Weather; and should be treated as hath been directed in the former Volume of the *Dictionary*, for the Sorts there enumerated. These may be propagated by Cuttings, as the common Sort.

PHYTOLACCA, *American Branching Nightshade*.

To this Article must be added;

PHYTOLACCA *Mexicana*, baccis sessilibus. *Hort. Elth.* Branching Nightshade of *Mexico*, with flatter Berries growing close to the Stalk.

This Plant grows in divers Parts of *America*: the late Dr. *Houstoun* observed it in great Plenty about *La Vera Cruz*, where the Sailors used to gather the Leaves of the Plant, and boil it instead of Spinach, which they eat without any ill Effects, tho' by most People these Plants were thought to have a poisonous Quality.

It may be propagated by Seeds, which should be sown in the Spring on a moderate Hot-bed; and when the Plants are come up, they should be transplanted on another Hot-bed, about four Inches asunder, where they may grow till the Plants are pretty strong, when they should be carefully transplanted into Pots, and plunged into a moderate Hot-bed, observing to shade them in the middle of the Day,

Day, until they have taken new Root; after which Time they should have a large Share of fresh Air in warm Weather, and must be plentifully watered: with this Management the Plants will flower in July, and their Seeds will ripen in September. The Plants will continue two or three Years, provided they are placed in a Stove, and kept in a moderate Degree of Warmth, otherwise they will perish in Autumn. The Berries of this Sort, when bruised, have a fine purple Juice, with which the Inhabitants make a fine Colour, but it is very apt to fade. The Juice of these Berries, mixt with Water in such Proportion as to make a strong Tincture, will tinge some white Flowers, so as to make them beautifully striped; but especially the tuberoses, whose Flowers when fully blown, should be cut off, and the Stem set into a Phial of this Tincture, which in one Night will be drawn up into the Flower, and appear in beautiful purple Stripes by the next Day.

PIMPINELLA, Burnet.

To this Article must be added;

1. PIMPINELLA *major Hispanica, spicâ dilute rubente.* H. R. Par. Greater Spanish Burnet, with a pale red Spike.

2. PIMPINELLA *major Hispanica altera, conglomerato flore.* H. R. Par. Another large Spanish Burnet, with a conglomerated Flower.

3. PIMPINELLA *Canadensis, spicâ longâ rubente.* H. R. Par. Canada Burnet, with a long red Spike.

4. PIMPINELLA *agrimonoides odorata.* H. R. Par. Sweet-scented Burnet, with the Appearance of Agrimony.

5. PIMPINELLA *sanguisorba minor hirsuta.* C. B. P. Lesser rough Burnet.

6. PIMPINELLA *sanguisorba inodora.* C. B. P. Unfavoury Burnet.

7. PIMPINELLA *sanguisorba minor, semine majore & crassiore.* Bot. Monsp. Smaller Burnet, with a larger and thicker Seed.

8. PIMPINELLA *spinosa, seu sempervirens.* Mor. Umb. Prickly ever-green Burnet.

The first, second, third, fifth, sixth and seventh Sorts, are hardy Plants, which continue several Years, and will live in the open Air. These may be propagated after the same manner as the common Sort, either by parting of the Roots in Autumn, or by Seeds, as hath been directed in the former Volume of the *Gardeners Dictionary*, which I shall not repeat here.

The fourth Sort is a biennial Plant, which is only cultivated by Seeds. The Seeds of this Sort should be sown in March, on a Bed of light fresh Earth in an open Situation; and when the Plants are come up, they should be carefully cleared from Weeds, and thinned where they are too close; and as the Plants increase in Size, so they should be reduced to leave them about a Foot apart; and many times the Plants will flower the same Year they were sown; but they always flower the second Year, and produce ripe Seeds, but seldom continue long after. The Leaves of this Plant, when rubbed, emit a grateful Odour.

The eighth Sort is an abiding Plant, which rises to the Height of two Feet or more, and becomes shrubby. The slender Branches of this Plant are beset with Thorns, at the Joints where the Leaves are produced; the Flowers are very small, and of an herbaceous Colour, which are seldom succeeded by Seeds in this Country.

This is propagated by Cuttings, which should be planted in the summer Months, on a Bed of fresh light Earth, and should be shaded either with Mats or oiled Paper, until they have taken Root, which will be in about six Weeks, or two Months, if they are carefully watered. When the Cuttings are rooted, they should be carefully taken up, and planted into separate Pots, filled with light fresh Earth, and placed in a shady Situation, until they have taken new Root; after which Time they may be exposed in a sheltered Situation, till the middle or latter End of October, when they should be placed under a Frame, to defend them from the hard Frost in Winter; but they must have as much free Air as possible in mild Weather; and in the Spring they should be placed abroad with Myrtles, and other hardy Plants, observing to water them duly in dry Weather. With this Management the Plants will thrive very well, and may be continued several Years.

PINUS, The Pine-tree.

To this Article should be added;

1. PINUS *sylvestris montana tertia.* C. B. P. The third wild mountain Pine, of Caspar Baubin.

2. PINUS *sylvestris montana altera.* C. B. P. Another wild mountain Pine.

3. PINUS *sylvestris maritima, conis firmiter ramis adhærentibus.* J. B. Wild maritime Pine, whose Cones adhere firmly to the Branches.

4. PINUS *maritima altera Matthioli.* C. B. P. Another maritime Pine of Matthioli.

5. PINUS *maritima minor.* C. B. P. Lesser maritime Pine.

6. PINUS *humilis, iulis virescentibus aut pallescentibus.* Inst. R. H. Dwarf Pine, with a green or pale Katkin.

7. PINUS *humilis, iulo purpurascente.* Inst. R. H. Dwarf Pine, with a purplish Katkin.

8. PINUS *conis erectis.* Inst. R. H. Pine whose Cones grow erect.

9. PINUS *Orientalis, foliis durioribus amaris, fructu parvo peracuto.* Tourn. Cor. Eastern Pine, with harder bitter Leaves, and a small sharp-pointed Cone.

10. PINUS *Hierosolymitana, prælongis & tenuissimis viridibus setis.* Pluk. Almag. Eastern Pine, with long narrow green Leaves.

11. PINUS *Virginiana, prælongis foliis tenuioribus, cono echinato.* Pluk. Almag. Virginian Pine, with longer narrower Leaves, and a rough Cone.

12. PINUS *Virginiana tripilis f. ternis plerumque ex uno folliculo setis, strobilis majoribus.* Pluk. Almag. Virginian Pine, having for the most part three Leaves, coming out of one Sheath, commonly called the Frankincense-tree.

13. *PINUS Virginiana*, *binis brevioribus* & *crassioribus setis*, *minori cono*, *singulis squamarum capitibus aculeo donatis*. *Pluk. Alm.* Virginian Pine, with shorter thicker Leaves, and smaller Cones, with a Prickle on the Top of each Scale, commonly called the Jersey Pine.

14. *PINUS Americana palustris patula*, *longissimis* & *viridibus setis*. Marsh spreading American Pine, with the longest green Leaves.

The eight first-mentioned Sorts grow wild in *Austria*, *Spain*, *Portugal*, and some other Parts of *Europe*. These are all of them very hardy, and may be propagated by Seeds, in the same manner as hath been directed for the Firs, under the Article *Abies*, in the former Volume of the *Gardeners Dictionary*.

The tenth Sort grows upon the Hills in the Neighbourhood of *Aleppo*, and in several other Places in the East. The Cones of this Kind are small, and the Seeds are destitute of Wings. This Sort is very hardy; for I have sown the Seeds in an open Bed of Earth, where the Plants have come up, and have made great Progress, without any farther Care but keeping them clear from Weeds. This Sort is very quick of Growth, and endures the Cold extremely well.

The ninth Sort was discovered by Doctor *Journefort* in the *Levant*, from whence he sent the Seeds to the Royal Garden at *Paris*. This bears the Cold extremely well, and may be propagated by Seeds, as the common Sorts.

The eleventh, twelfth, thirteenth and fourteenth Sorts are Natives of *America*, from whence their Cones have been brought into *Europe*, and many of the Plants have been raised, which are in the Gardens of several curious Gentlemen. These Plants are somewhat tender, when they first arise from Seeds; so they should be particularly taken Care of, the first Summer, otherwise they will drop away in a short Time. The Seeds of these Kinds should be sown in Pots or Tubs filled with very light Earth, and they should have some light shifted Earth spread over them, about a quarter of an Inch thick. These Pots or Tubs must be shaded with Mats, or oiled Paper, to screen the Plants from the Sun; and these Coverings should be taken off every Night, unless the Weather is cold or stormy, when they should be continued on. For if the Plants are exposed to too much Wet, or strong Winds, it will destroy them while they are very young; tho', when they have obtained Strength, they will resist the Severity of Weather extremely well. The Plants should be frequently refreshed with Water, but it must not be given to them in large Quantities, for the Reason before assigned. Toward the middle of the Summer, the Plants should be exposed to the Sun by degrees, taking the Covers off in the Afternoon, and letting them remain off longer in the Morning, so that by the middle of *July*, they may be quite exposed in the open Air, observing to water them duly in dry Weather. About the latter End of *October*, the Pots or Tubs must be placed under a common

Frame, where they may be sheltered from excessive Rains or Frosts in the Winter; but they must have as much free Air as possible in mild Weather. The following Spring these Plants should be transplanted, when there must be a Bed of light fresh Earth prepared, in a well-sheltered Situation; and in the Beginning of *April*, if the Season proves warm, they may be removed; but if it should prove cold, it is much better to defer it a little later in the Month. In taking of them up, great Care should be had, that the Fibres of their Roots are not broken, as also to plant them immediately; for if the Air dries their Roots, they very rarely survive it. The Distance these Plants should be planted in the Bed, is about ten Inches or a Foot; and as soon as they are planted, they should be gently watered three or four times over, so as to moisten the Earth thoroughly, but not to bear down the Plants. Then the Bed should be arched over with Hoops or Withies, and covered with Mats, or oiled Paper, to screen the Plants from the Sun and drying Winds, until they have taken Root, after which Time they should be inured to bear the open Air by degrees; but then it will be proper to lay some Mulch on the Surface of the Ground, to prevent the Sun and Air from penetrating of the Ground, so as to dry the Fibres of the Plants; and during this Season, the Plants must be watered in dry Weather; for as they have but small rooting in the Ground while they are young, so a little Drought will greatly injure, if not absolutely destroy them. The following Winter, if the Frost should prove extremely hard, it will be of great Service to the Plants, to screen them with oak Branches, which retaining of their Leaves, will greatly protect the Plants from the Severity of the Frost, and they will not be so close as to exclude the Air wholly from them. But when the Frost is over, the Branches should be taken away by degrees, so as not to expose the Plants at once to the open Air; for an Indiscretion of this Kind may destroy more Plants than the Frost would have done, if they had been exposed thereto.

In this Bed the Plants may remain two Years, when it will be proper to transplant them where they are to remain for good; for these Plants do not bear transplanting when they are large. When this is performed, it should be in *April*, just before the Plants begin to shoot, and, if possible, in a rainy or cloudy Season. The Plants should be taken up with good Balls of Earth to their Roots, and the Holes should be opened, and thoroughly moistened before, so that the Plants may be immediately planted after they are taken up, that their Roots may not suffer from the Air. Then they should be watered to settle the Earth to their Roots, and the Surface of the Ground should be covered with Mulch, to prevent the Sun and Air from drying of their Roots; and if the Season should continue dry, it will be proper to water them twice a Week, but they should not have too much Water given them each Time. When the Plants are well fixed in the Ground, they require no farther

farther Care, but to keep them clear from large Weeds, which if permitted to grow, would overbear the Plants while they are young.

All these Sorts of *American Pines* should be planted on a Soil rather moist than dry, but especially the fourteenth Sort, which grows naturally on low moist boggy Places, and will not thrive on a dry Soil. This Tree hath a very remarkable Growth; for the Branches spread near the Ground to a great Distance from the Stem, and never rise in Height. The thirteenth Sort is the most common in the Northern Parts of *America*, where the Inhabitants call it the *Fersey-pine*.

As all the *European Kind* of Pines are Inhabitants of Mountains and Hills, so they delight in a hard rocky Soil, for which there are no Trees more proper; therefore whenever it happens in a large Plantation, that there is a low moist Place intervening between two Hills, that may be planted with these *American Pines*; so that the whole Plantation will appear, at a Distance, of the same Trees; and when nearer, the different Shades of their Leaves will diversify the Prospect; for which reason all these Sorts of Trees should be propagated in the Nurseries.

PISONIA, Fingigo, vulgô.

The Characters are;

It is Male and Female in different Plants; the Male Flowers consist of a great Number of Stamina, and have no Petals: the Female Flowers consist of one Leaf, which is bell-shaped, and divided at the Top into five Parts: from whose Cup arises the Pointal, which afterward becomes an oblong angular channelled Fruit, containing oblong Seeds.

The Species are;

1. *PISONIA aculeata mas.* Houst. The Male Fingigo.

2. *PISONIA aculeata, fructu glutinoso & racemoso.* Plum. Nov. Gen. Prickly Pisonia, with a glutinous and branching Fruit.

These Plants are seminal Variations, which arise from the Seeds of the same Plant; but as they were not distinguished by any of the Botanists, till the late Dr. Houstoun observed their Difference, so I thought proper to mention the different Sexes as separate Plants.

The Name of this Plant was given by Father Plumier in Honour to Dr. William Piso, who Published a Natural History of *Brasil*. The Name of *Fingigo* is what the Inhabitants of *Jamaica* know it by.

These Plants are very common in the *Savanna's* and other low Places in the Island of *Jamaica*, as also in several other Places in the *West-Indies*; where it is very troublesome to whoever passes thro' the Places of their Growth, by fastening themselves, by their strong crooked Thorns, to the Cloaths of the Persons; and their Seeds being glutinous, also fasten themselves to whatever touches them. So that the Wings of the Ground Doves, and other Birds are often loaded with the Seeds, so as to prevent their Flying, by which means they become an easy Prey.

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It rises about ten or twelve Feet high, with a pretty strong Trunk; but the Branches are long and slender, whereby being unable to support themselves, they generally twist about whatever Plants are near them.

In *Europe* this Plant is preserved in the Gardens of some curious Persons for Variety: it is propagated by Seeds which should be sown in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; and when the Plants come up, they should be transplanted into separate Pots, and plunged into the Hot-bed again; where they may remain till *Michaelmas*, when they should be removed into the Stove, and plunged into the Bark-bed, and treated in the same manner as hath been directed for several tender Plants of the same Country; observing in hot Weather to give them plenty of Water, but in Winter they should have it more sparingly. They are too tender to thrive in the open Air of this Country at any Season of the Year, so should be constantly kept in the Stove.

PITTONIA.

The Characters are;

It hath a globular bell-shaped Flower, consisting of one Leaf, which is cut into several Segments at the Brim; from whose Cup arises the Pointal, which afterward becomes a soft spherical Berry full of Juice, inclosing two Seeds, which are for the most part oblong.

The Species are;

1. *PITTONIA arborescens chamædrifolia major.* Plum. Nov. Gen. Greater tree-like Pittonia, with a germander Leaf.

2. *PITTONIA arborescens chamædrifolia minor.* Plum. Nov. Gen. Smaller tree-like Pittonia, with a germander Leaf.

3. *PITTONIA bumilis, anbusæ foliis.* Plum. Nov. Gen. Dwarf Pittonia with alkanet Leaves.

4. *PITTONIA scandens, baccis niveis, nigris maculis notatis.* Plum. Nov. Gen. Climbing Pittonia, with white Berries spotted with Black.

5. *PITTONIA frutescens folio carnosso, hirsuto & obtuso.* Plum. Nov. Gen. Shrubby Pittonia with a hairy fleshy obtuse Leaf.

6. *PITTONIA hirsutissima & ramosissima, baccis albis.* Plum. Nov. Gen. The most hairy and branched Pittonia, with white Berries.

7. *PITTONIA racemosa, nicotianæ foliis foetidissimis.* Plum. Nov. Gen. The most stinking branchy Pittonia, with tobacco Leaves.

These Plants are all of them Natives of the warmest Parts of *America*, where the first Sort grows to the Height of twelve or fourteen Feet, and divides into many Branches, so as to form a small Tree. The second, fifth and seventh Sorts, grow to the Height of eight or nine Feet, and produce many Branches near their Roots, so as to form thick Bushes.

They may be all propagated by Seeds, which should be sown early in the Spring in Pots filled with fresh Earth, and plunged into a Hot-bed of Tanners-bark; and when the Plants are come up, they may be treated after the same manner as hath been directed for the

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Persea: with which Management these Plants will thrive very well, and in few Years will produce their Flowers. These are preserved by those Persons who are curious in collecting rare Plants, but there is no great Beauty in their Flowers; however, as they are ever-green, so they make a Diversity amongst other exotic Plants in the Stove in the winter Season.

PLINIA.

The Characters are;

It hath a bell-shaped Flower consisting of one Leaf, which is divided into five Segments at the Brim; from whose Cup rises the Pointal, which afterward becomes a globular, soft, channelled Fruit, in which is included one Seed of the same Form.

We have but one Species of this Plant, which is;

PLINIA fructu croceo odorato. Plum. Nov. Gen. Plinia with a sweet-scented saffron-coloured Fruit.

This Plant was discovered by Father Plumier in the *West-Indies*, who gave it this Name, in Honour to Pliny the famous Natural Historian.

It grows in several Places in the warmer Parts of *America*, from whence the Seeds have been sent to *Europe*. These Seeds must be sown in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark, observing to moisten the Earth with Water whenever it appears dry, as also to preserve a moderate Temperature of Heat in the Bed, so that if the Nights should prove cold, the Glasses of the Hot-bed should be every Night covered with Mats; and in the middle of the Day the Glasses may be raised to admit fresh Air, when the Weather is warm. These Seeds will sometimes remain long in the Ground before the Plants appear; and whenever it so happens, the Pots must be constantly kept clear from Weeds, and duly watered. And when the Plants come up, they should be transplanted into Pots, and may be managed as is directed for the *Pittonia*.

PLOUGHING of Land.

There is not a greater Improvement of arable Land, than that of well ploughing it; by which Method the Soil is pulverised, and rendered fit to receive the Fibres of Plants. And the oftener this is repeated, the greater Improvement is made. But as this Part of Agriculture has been fully treated of by the several Writers on Husbandry, I shall not repeat what they have said, but subjoin a few Remarks to those already published.

In ploughing of Land, great Regard should be had to the Crop which is designed to be sown; for if the Plants have Tap-roots, which run deep into the Ground, then it should be ploughed deep; otherwise, when the Roots have reached so low as to meet with the unstirred Earth, they will stop, and divide into small forked Roots, and be good for little. It has been often asserted, that deep ploughing is very injurious to many Soils; but from repeated Observations it appears otherwise; for where-ever there is Depth enough of Soil to

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admit of deep ploughing, when it is practised rightly, it is a vast Improvement to the Land. Indeed, where the Land is very stubborn, and ploughed so deep as to turn up the strong Part on the Surface, and this is not well wrought to divide the Parts, it often proves a Disadvantage to the Crop; but when this is practised, it should always be done the Beginning of Winter, so that it may be exposed to the Frost, which will be of great Use, by entering of the Clods, and causing them to crumble after the Thaw; then in the Spring it should be again ploughed, and this repeated twice more at least the following Summer, which will not only destroy the Weeds, but so divide the Particles of Earth, as to make it fall easily under the Harrow.

The Difference between Land which is dug by hand, and that which is ploughed, consists in having the Parts more divided; so that every Person who is curious in Working of his Land, will oblige his Labourers to take as thin Spits of Earth as possible, that there may remain no large Clods unbroken. And it is the same in ploughing; for if the Land is ploughed three or four times carefully, it will divide the Clods equal to the Land which is dug, and will sufficiently repay the Husbandman. But this is not to be done with the common Plough, for that will not divide the Parts, therefore the Plough with four Coulters; should be used for this purpose. As this Sort of Plough requires more Strength to draw it, so it should not be used but in wet Weather; for when the Ground is moist, this Plough may be more easily drawn, than when it is dry and hard; and there is no Danger of injuring the Land, by ploughing in wet Weather with this Plough, tho' there is much in the common Plough at such times; because, when the Furrow is turned over whole, the Clods well cement with the Wet; and where the Cattle tread on it, the Ground will be rendered as hard as before it was stirred.

It hath been a Practice in some Counties, where the Land is mellow, to plough the Top of the Furrow, and then with six or seven Labourers to dig after the Plough, and throw the Earth on the Top, which is almost equal to digging of the Land two Spits deep, and is performed at a much easier Expence: but this is never practised, except for some particular Crops, which root very deep in the Ground.

The Models or Draughts of all the Sorts of Ploughs in Use being already exhibited in the several Books of Husbandry extant, I shall not give any farther Account of them.

PLUMBAGO, Leadwort.

To this Article must be added;

1. *PLUMBAGO flore albo. Inst. R. H.* Leadwort with a white Flower.
2. *PLUMBAGO Orientalis, lapathi folio, flore minori albido. Tourn. Cor.* Eastern Leadwort, with a dock Leaf, and a smaller whitish Flower.
3. *PLUMBAGO Americana scandens aculeata, betæ folio minori. Plum. Cat.* Prickly Climbing American Leadwort, with a lesser Beet-leaf.

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The first Sort here mentioned differs in nothing from the common Sort, which is mentioned in the former Volume of the *Dictionary*, except in the Colour of the Flower; that having a purple, and this Sort a white Flower; so that they may be indifferently used in Medicine.

The second Sort was discovered by Dr. *Tournefort* in the *Levant*. This is a hardy Plant, which will endure the Cold of our ordinary Winters extremely well in the open Air. Both these Sorts may be propagated and managed in the same manner as is directed for the ordinary Sort in the former Volume of the *Dictionary*.

The third Sort was discovered by Father *Plumier*, in some of the *French Settlements* in *America*, and since was found by the late Dr. *Houftoun* at *La Vera Cruz*. This Sort may be propagated by Seed, which should be sown on a Hot-bed early in the Spring, and must be afterward treated in the same manner as is directed in the former Volume of the *Gardeners Dictionary*, for the second Sort there mentioned. This Sort will abide several Years, if it is preserved in a Stove in the Winter, and will ripen Seed every Year.

PLUMERIA, The Jasmine-tree, *vulgô*.

The Characters are;

It hath a funnel-shaped Flower, consisting of one Leaf, which is cut into several Segments at the Brim, out of whose Cup arises the Pointal, which afterward becomes the Fruit or Pod, which for the most part grow double, and open lengthwise, discovering the Seeds, which are oblong, and have a Border round them: these are ranged over each other like Slates on a House, and are fastened to the Placenta.

The Species are;

1. PLUMERIA *flore roseo odoratissimo*. *Inst.* R. H. Plumeria with a rose-coloured sweet-scented Flower, commonly called in the *West-Indies* red Jasmine.

2. PLUMERIA *flore majore odorato & incarnato*. Plumeria with a larger sweet-scented and incarnate Flower, called in the *West-Indies* the Japan-tree.

3. PLUMERIA *flore niveo, foliis longis angustis & acuminatis* *Inst.* R. H. Plumeria with a snowy Flower, and long narrow pointed Leaves.

4. PLUMERIA *flore niveo, foliis brevioribus & obtusis*. *Inst.* R. H. Plumeria with a snowy Flower, and shorter blunt Leaves.

5. PLUMERIA *foliis longissimis, minus succulentibus, flore pallido*. *Houft.* Plumeria with very long and less succulent Leaves, and a pale Flower.

6. PLUMERIA *folio latiore obtuso, flore luteo minore*. Plumeria with a broad obtuse Leaf, and a smaller yellow Flower.

This Name was given to this beautiful Genus of Plants, by Dr. *Tournefort*, in Honour to Father *Plumier*, who was Botanist to the late King of *France*, and a long Time in *America*, searching after new Plants, and who has published a Catalogue of the Plants he discovered, with the new Genus's he constituted:

and two Volumes in Folio, with Figures and Descriptions of many of the Plants.

These Plants grow wild in the *Spanish West-Indies*, from whence some of the most beautiful Kinds were brought into the *English Settlements* in *America*, and are cultivated in their Gardens for Ornament. The first Sort here mentioned, is the most common Kind, which is preserved in the Gardens of the Inhabitants of *Jamaica* and *Barbados*. The Flowers of this Kind nearly resemble those of the red Oleander, but are larger, and have an agreeable Odour. These are produced in small Bunches, at the Extremity of the Shoots, and generally appear in *July* and *August*, in this Climate; but in the *West-Indies*, they flower a great Part of the Year.

The second Sort I received from the Island of *St. Christophers* by the Name of *Japan-tree*: this Sort is very rare in the *English Settlements* at present, having been but lately introduced from the *Spanish West-Indies*: it is in Leaf and Stem very like the first, but the Flowers of this are of a paler Colour, and are produced in much larger Bunches. It is very common to have upward of twenty of these Flowers open in one Bunch, and a Number to succeed these as they decay, so as that the Bunches have continued in Beauty upward of two Months; during which time they make a most beautiful Appearance in the Stove, and have a very agreeable Flavour.

The third Sort grows plentifully at *Campechy*, from whence the late Dr. *Houftoun* sent the Seeds. He also observed some Plants of this Kind at *Jamaica*. The sixth Sort is also pretty common in both those Places. These are not near so beautiful as the two former Sorts, their Flowers being smaller, and produced in lesser Bunches, and are moreover of shorter Duration. But for the Beauty of their Stems and Leaves, and for the Sake of Variety, they deserve Room in every curious Collection of Plants.

The fourth and fifth Sorts, were discovered by Dr. *Houftoun*, growing in great plenty near *Carthagera* in the *Spanish West-Indies*, from whence he sent their Seeds to *England*. The fourth Sort produces small white Flowers, resembling those of the third, so is less valuable than the two first. But the fifth Sort produces as large Flowers as the first; but they are of a pale red Colour, and smell very sweet. The Leaves of this Sort are sometimes ten Inches or a Foot in Length, and about three Inches over in their broadest Part. These are not near so thick, or full of Juice, as are those of the other Sorts, nor are they so deeply veined; but being of a bright shining green Colour, they make an agreeable Variety amongst other tender exotic Plants in the Stove.

All these Plants may be propagated by Seeds, which should be sown in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; and when the Plants are come up about two Inches high, they should be transplanted into separate small Pots, filled with light sandy Earth, and plunged into the Hot-bed again, observing to shade them from the

the Heat of the Sun in the middle of the Day until they have taken Root: but they must not have much Water, for as all the Sorts are very succulent, being full of a milky Juice, somewhat like the Euphorbiums, so Moisture will cause them to rot. In hot Weather the Plants should have a pretty large Share of fresh Air admitted to them, by raising of the Glasses of the Hot-bed every Day, in proportion to the Warmth of the Season. Toward Michaelmas, when the Nights begin to be cold, the Plants should be removed into the Stove, and plunged into the Bark-bed, where they must remain during the Winter. As these Plants all cast their Leaves in the Middle of Winter, and continue destitute of them till about the Beginning of May, so during that Time they should be watered very sparingly; because they are in more danger of rotting, while they are in a less active State, by too much Moisture, than when they are furnished with Leaves, thro' which the Moisture is more freely perspired.

All these Sorts are too tender to thrive in the open Air of this Country in the summer Season; so they should be constantly preserved in the Stove, where in warm Weather, they must have a large Share of free Air; but in cold Weather they must be kept very warm. While they are young, it will be proper to continue them in the Bark-bed, but when they have obtained Strength, they may be placed in the dry Stove, where they will thrive very well, provided they are kept in a moderate Temperature of Heat, and have not too much Water.

These Plants may also be propagated by Cuttings, which should be taken from the old Plants a Month before they are planted, during which Time they should be laid on the Flues in the Stove, that the Part which joined to the old Plant, may be thoroughly healed, otherwise they will rot. These Cuttings should be planted in small Pots filled with light sandy Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them up in the Heat of the Day from the Sun, and refresh them every third or fourth Day with Water; but it must be given to them sparingly each Time. If the Cuttings succeed they will have taken Root in about two Months, when they should have a larger Share of Air, to harden them by Degrees to bear the Sun and Air, and afterward may be treated as the old Plants.

The milky Juice of these Plants is very caustic, and reckoned very poisonous: in cutting off any of the Branches of the Plants, if the Knife be not immediately cleaned, the Juice will corrode it, and turn the Blade almost black in a very little Time, so as not to be cleaned off again; and if dropped on Linen, will cause it to wash in Holes, equal to *Aqua fortis*.

POINCIANA, Barbados Flower-fence.

To this Article must be added:

1. POINCIANA flore luteo. Houst. Barbados Flower-fence, with a yellow Flower.

2. POINCIANA flore rubente. Houst. Flower-fence with a reddish Flower.

3. POINCIANA spinosa, vulgâ TARA. Feuill. Prickly Flower-fence, commonly called Tara.

The first and second Sorts were discovered by the late Dr. Houstoun at Campechy, where they grew in great Plenty. These do not differ in any thing from the common Sort, which is mentioned in the former Volume of the *Gardeners Dictionary*, except in the Colour of their Flowers; that having a Flower variegated with Red and Yellow, and these have Flowers one of them intirely Yellow, and the other of a plain red Colour.

The third Sort was discovered by Pere Feuillée, growing plentifully in the Vallies of Lima. The Flowers of this Kind are smaller than those of the other Sorts, and are of a greenish yellow Colour, so that they are not near so beautiful. The Seed-pods of this Sort are used by the Dyers in the *Spanish West-Indies*, for Dying of Black; and they are also used for making of Ink: the Infusion of these Pods with Galls, affords the most beautiful black Ink in the World.

These three Sorts may be propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants come up, they must be treated in the same manner as is directed for the common Sort, in the former Volume of the *Gardeners Dictionary*, which I shall not repeat here.

POLIUM, Mountain-poley.

To this Article must be added;

1. POLIUM montanum alterum, foliis angustioribus, capitulis longioribus. C. B. P. Another Mountain-poley, with narrower Leaves, and longer Heads.

2. POLIUM montanum repens. C. B. P. Creeping Poley-mountain.

3. POLIUM maritimum supinum Venetum. C. B. P. Creeping maritime Venetian Poley-mountain.

4. POLIUM Hispanicum, Chamædryos folio, purpurascete flore. Inst. R. H. Spanish Poley-mountain, with a germander Leaf, and a purplish Flower.

5. POLIUM Lusitanicum supinum minus incanum, caulibus purpurascetibus, flore albo. Inst. R. H. Creeping less hoary Portugal Poley-mountain, with purplish Stalks, and a white Flower.

6. POLIUM Hispanicum latifolium, capitulo breviori, purpurecente flore. Inst. R. H. Broad-leaved Spanish Poley-mountain, with a shorter Head, and purplish Flower.

7. POLIUM Hispanicum maximum album. Inst. R. H. The largest white Spanish Poley-mountain.

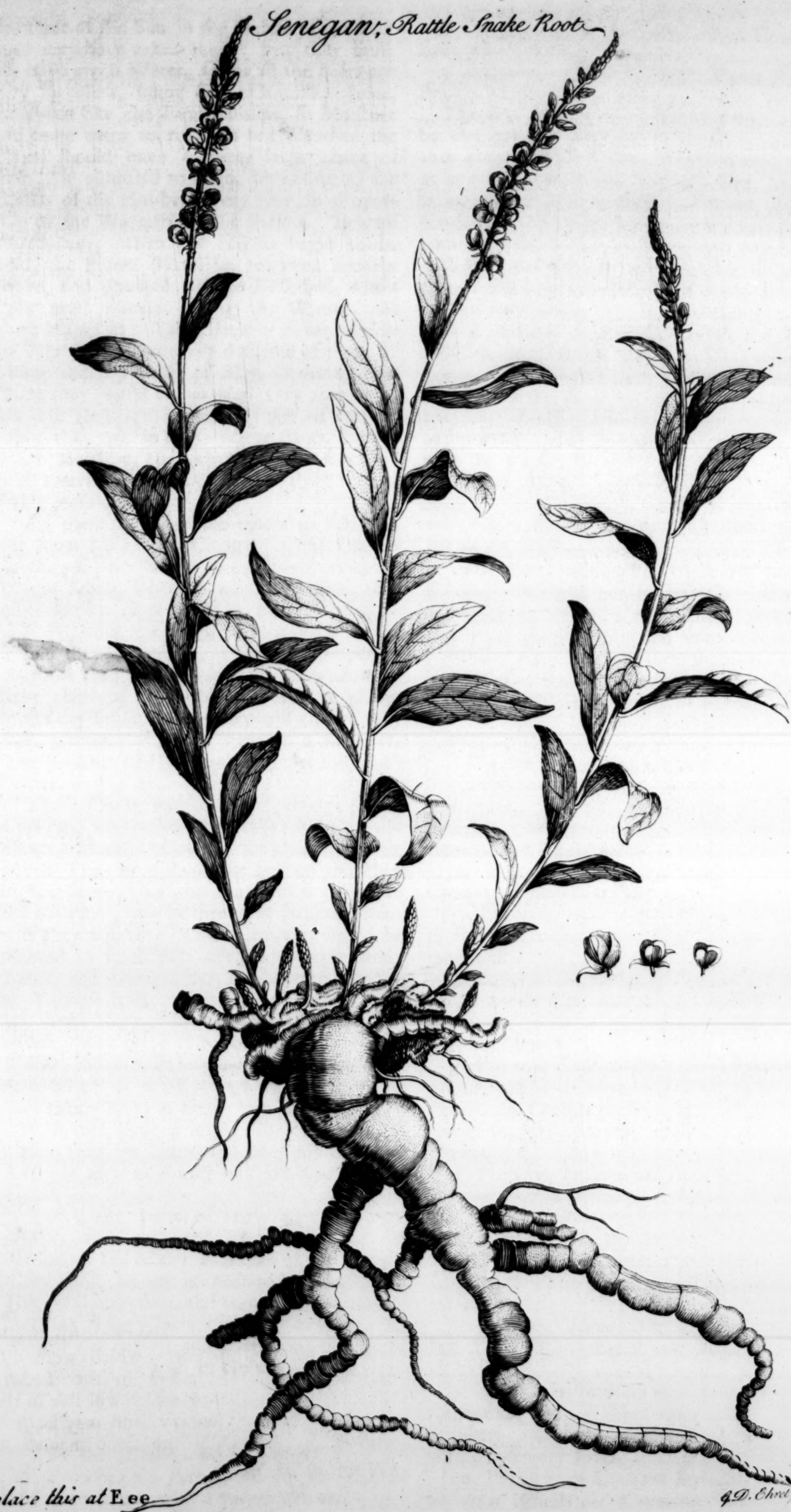
8. POLIUM Hispanicum maximum luteum. Inst. R. H. The greatest yellow Spanish Poley-mountain.

9. POLIUM Hispanicum maritimum frutescens, rorismarini folio, flore rubro. Inst. R. H. Shrubby maritime Spanish Poley-mountain, with a rosemary Leaf, and a red Flower.

10. POLIUM Hispanicum supinum, flore flavescete. Inst. R. H. Creeping Spanish Poley-mountain,

POLYGALA; Virginiana foliis oblongis floribus in thyrsis candidis radice Alexipharmica.

Senegan; Rattle Snake Root



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mountain, with a yellowish Flower.

11. *POLIUM Hispanicum, linariae foliis brevioribus, flore albo.* Inst. R. H. Spanish Poley-mountain, with shorter Toadflax-leaves, and a white Flower.

12. *POLIUM montanum gnaphaloides incisum, flore rubro, & supinum.* Barr. Icon. Creeping Poley-mountain resembling Cudweed, with a red Flower.

13. *POLIUM Hispanicum luteum, majoranae folio.* Inst. R. H. Yellow Spanish Poley-mountain, with a marjoram Leaf.

14. *POLIUM Hispanicum, serpylli folio, purpurascens flore.* Inst. R. H. Spanish Poley-mountain, with a mother-of-thyme Leaf, and a purplish Flower.

15. *POLIUM Hispanicum, thymi folio, purpurascens coma.* Inst. R. H. Spanish Poley-mountain, with a thyme Leaf, and a purplish Top.

16. *POLIUM Creticum maritimum humifusum.* Tourn. Cor. Trailing maritime Poley-mountain of Crete.

17. *POLIUM Smyrnaeum, scordii folio.* Tourn. Cor. Smyrna Poley-mountain, with a water-germander Leaf.

All these Sorts of Poley-mountain are pretty hardy Plants, so will endure the Cold of our ordinary Winters in the open Air, provided they are planted in a warm Situation, and on a dry stony Soil; for if they are planted in a rich moist Soil, they will grow very freely in Summer; but being replete with Juice are apt to rot in Winter, so that when they are planted on a lean stony Soil, where they will be stunted, and grow short, and have small Leaves, they will abide several Years. These Plants seldom produce good Seeds in this Country, so are propagated by Cuttings, which may be planted any Time in the Summer, in a Bed of fresh Earth, observing to shade them until they have taken Root, as also to refresh them with Water in dry Weather. When they are rooted, they will want no farther Care, but to keep them clear from Weeds; and at Michaelmas they may be transplanted into the Places where they are designed to remain, that they may be well rooted before the Frost comes on.

These Plants are chiefly preserved in Botanic Gardens for Variety; but they may be rendered ornamental in other Gardens, where they will grow on stony gravelly Soils; and their hoary Leaves and Branches, with the different Colour of their Flowers, will make an agreeable Prospect, if they are properly disposed.

POLYGALA, Milkwort.

To this Article must be added;

1. *POLYGALA acutioribus foliis, Monspelica.* C. B. P. Montpellier Milkwort, with sharp-pointed Leaves.

2. *POLYGALA acutioribus foliis, Monspelica, floribus caeruleis.* H. R. Monsp. Montpellier Milkwort, with sharp-pointed Leaves, and blue Flowers.

3. *POLYGALA foliis lanceolatis brevibus.* Bocc. Mus. Milkwort with short spear-shaped Leaves.

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4. *POLYGALA montana minima myrtifolia.* Inst. R. H. The least mountain Milkwort, with a myrtle Leaf.

5. *POLYGALA Cretica vulgari similis, flore albido longiore.* Tourn. Cor. Milkwort of Crete like the common Sort, with a longer whitish Flower.

6. *POLYGALA Orientalis supina myrtifolia, flore caeruleo.* Tourn. Cor. Low Eastern Milkwort, with a myrtle Leaf, and a blue Flower.

7. *POLYGALA Orientalis linifolia, flore magno albo.* Tourn. Cor. Eastern Milkwort, with a flax Leaf, and a large white Flower.

8. *POLYGALA Orientalis linifolia, flore magno purpureo.* Tourn. Cor. Eastern Milkwort, with a flax Leaf, and a large purple Flower.

9. *POLYGALA Lusitanica frutescens, magno flore, foliis minimis.* Inst. R. H. Shrubby Portugal Milkwort, with a large Flower, and very small Leaves.

10. *POLYGALA Africana frutescens angustifolia major.* Oldenl. Greater shrubby African Milkwort, with a narrow Leaf.

11. *POLYGALA Africana, lini folio, magno flore.* Oldenl. African Milkwort, with a flax Leaf, and a large Flower.

12. *POLYGALA Virginiana, foliis oblongis, floribus in thyrsis candidis, radice alexipharmica.* Milkwort of Virginia, with oblong Leaves, and white Flowers, growing in a loose Spike, whose Root is alexipharmic, commonly called, the Senegaw Rattle-snake-root.

13. *POLYGALA caerulea Americana, angustis & densioribus foliis, vulgo Clin-clin.* Feuillée. Blue American Milkwort, with narrow Leaves, commonly called by the Indians Clin-clin.

14. *POLYGALA rubra Virginiana, spica parva compacta.* Banist. Red Virginian Milkwort, with a small compact Spike.

15. *POLYGALA spicata rubra major, foliis & caulibus caeruleis.* Banist. Greater red spiked Milkwort, with bluish Leaves and Stalks.

16. *POLYGALA f. Flos Ambarvalis Virginiana, floribus luteis in caput oblongum congestis.* Banist. Virginian Milkwort, with yellow Flowers collected in an oblong Head.

17. *POLYGALA quadrifolia f. cruciata, floribus ex viridi rubentibus, in globum compactis.* Banist. Four-leaved Milkwort, with reddish green Flowers, growing in a compact Globe.

18. *POLYGALA quadrifolia minor Virginiana, spica parva rubenti.* Banist. Smaller four-leaved Virginian Milkwort, with a small reddish Spike.

19. *POLYGALA Mariana, angustiore folio, flore purpureo.* Pluk. Mantis. Narrow-leaved Milkwort of Maryland, with a purple Flower.

20. *POLYGALA Mariana quadrifolia minor, spica parva albicante.* Pluk. Mantis. Smaller four-leaved Milkwort of Maryland, with a small whitish Spike.

The four Sorts first-mentioned are low Plants, which grow in Spain, Italy, and the South of France; as are also the fifth, sixth, seventh and eighth Sorts, which were discovered by Dr. Tournefort in the Levant. These are hardy Plants, which will live in the open Air in this Country, and may be propagated by Seeds, in the same manner as the common Sort.

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The ninth and tenth Sorts are shrubby Plants, which are preserved in some curious Gardens for Variety. These may be also propagated by Seeds, which should be sown on a moderate Hot-bed in the Spring; and when the Plants are come up, they should be transplanted into separate Pots, filled with light fresh Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun until they have taken Root; after which Time they should have a large Share of fresh Air in warm Weather, and must be frequently watered. About the middle of May, these Plants should be inured to bear the open Air by degrees; and in June, they may be placed abroad in a sheltered Situation, where they may remain during the summer Season; and in Autumn they must be removed into the Green-house, and managed as hath been directed for the fifth Sort mentioned in the former Volume of the *Gardeners Dictionary*. These Plants continue a long time in Flower, so are worthy of a Place in every curious Garden, for the sake of Variety.

The eleventh Sort is a Native of the *Cape of Good Hope*, and the thirteenth grows on the Mountains in the Kingdom of *Chily* in the *Spanish West-Indies*, where it is used by the *Indians*, to cure Pleurifies, and all Complaints of the Side. These two Sorts are of low Growth, seldom rising higher than the common Sort; but are too tender to live in the open Air in *England*; so they should be planted in Pots, and preserved in the Green-house in Winter. These may be propagated by Seeds as the two former Sorts.

The other Sorts are all of them Natives of *Virginia*, *Maryland*, *New England*, and several other Places in the North of *America*; so are hardy enough to live in the open Air in *England*, provided they are planted in a warm Situation, and on a light Soil. These are very pretty Plants, and require very little Trouble to cultivate them; for after they are come up from Seeds, the only Care they require, is to keep them clear from Weeds, and in very dry Weather to water them while they are young; for when they have obtained Strength, they will not be in much Danger of suffering by Drought; for the Roots run pretty deep into the Ground, so will find Nourishment to support them.

The Root of the twelfth Sort hath been long used by the *Senegaw Indians* to cure the Bite of the Rattle-snake, which, if taken in Time, is an infallible Remedy. And of late Years it hath been used by the Inhabitants of *Virginia* in many Disorders, which are occasioned by a thick fizy Blood; so that the Root of this Plant, when its Virtues are fully known, may become one of the most useful Medicines yet discovered. The thirteenth Sort, by the Account which *Pere Feuillée* gives of it, partakes of the same Qualities with this, tho' the *Indians* use it differently; for he says they make a Decoction of the Plant, which they drink to cure the Pain of the Side; whereas the *Senegaw Indians* use the Root of the twelfth Sort, which they powder and generally carry

about them, when they travel in the Woods, lest they should be bit by the Rattle-snake; and whenever this happens, they take a Quantity of the Powder inwardly, and apply some of it to the Part bitten, which is a sure Remedy.

POLYGONATUM, Solomon's-seal.

The *Species* omitted in the former Volume are;

1. *POLYGONATUM latifolium maximum*. C. B. P. The greatest broad-leaved Solomon's-seal.

2. *POLYGONATUM latifolium, bellebori albi foliis*. C. B. P. Broad-leaved Solomon's-seal, with Leaves like the white Hellebore.

3. *POLYGONATUM latifolium, flore majore odoro*. C. B. P. Broad-leaved Solomon's-seal, with a large sweet Flower.

4. *POLYGONATUM Orientale latifolium, flore parvo*. Tourn. Cor. Eastern broad-leav'd Solomon's-seal, with a small Flower.

5. *POLYGONATUM angustifolium non ramosum*. C. B. P. Narrow-leaved unbranched Solomon's-seal.

6. *POLYGONATUM angustifolium ramosum*. C. B. P. Narrow-leaved branching Solomon's-seal.

7. *POLYGONATUM Americanum scandens altissimum, foliis tamni*. Plum. The tallest climbing *American* Solomon's-seal.

The first and second Sorts grow very tall, provided they are planted in a pretty good Soil. In a moist Season it is common for these to be upward of three Feet high, whereas the ordinary Sort seldom rises above half that Height. The Leaves of these Sorts are also very large, so that they make a handsome Appearance in the Borders of large Gardens.

The third Sort hath broader Leaves than the common Sort, but doth not grow much higher. The Flowers of this Sort, being larger, and having an agreeable Scent, render it worthy of a Place in large Gardens.

The fourth Sort was discovered by Dr. *Tournefort* in the *Levant*, but is not common in *Europe*: this hath a broader Leaf than the common Sort, and the Flower is much smaller. It is preserved in some curious Botanic Gardens, for the sake of Variety.

The fifth and sixth Sorts are very different from either of the former: these have four or five Leaves, produced at each Joint, which are much longer and narrower than those of the common Sort, so that they make a very different Appearance; therefore should be allowed a Place in large Gardens for the sake of Variety.

All these Sorts are as hardy as the common Solomon's-seal, and may be propagated by parting of their Roots, in the same manner as is directed in the former Volume of the *Gardeners Dictionary*, for the common Sort.

The seventh Sort is a Native of the warmest Parts of *America*, where it grows in the Woods, and climbs on whatever Trees grow near it, by the Help of which it rises to a great Height. This produces its Flowers in long Bunches, somewhat like the black Briony.

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The Seeds of this Plant were sent from *Campechy*, by Mr. Robert Millar Surgeon. This Plant must be preserved in Stoves, otherwise it will not live thro' the Winter in this Country; it may be propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be treated in the same manner as hath been directed for *Dioscorea*: with which Management this Plant will thrive, and produce Flowers in this Country.

POPULUS, The Poplar-tree.

To this Article must be added;

POPULUS nigra Caroliniana, folio maximo, gemmis balsamum odoratissimum fundentibus. Catesb. The Carolina black Poplar, with the largest Leaf, from whose Buds issue a very sweet Balsam.

This Sort of Poplar-tree grows by the Sides of Rivers, and in other moist Places, in *South Carolina*, where it rises to be a very large Tree. The young Branches of this Tree are commonly angular, sometimes having three, and at other times four Angles. The Leaves are much broader, and are not so pointed, as those of the common black Poplar. The Buds of the Leaves are very large, and in the Spring, just before they push, there issues out of them a very sweet Balsam.

Altho' this Tree is a Native of a much warmer Country than *England*, yet it is hardy enough to endure the Cold of our Winters in the open Air; and may be propagated by Cuttings, in the same manner as the common black Poplar: the best Time to Plant these Cuttings, is in the Beginning of *March*. These Cuttings should be about a Foot or fourteen Inches long, and should be planted six or eight Inches in the Ground. If the Spring should prove dry, they must be frequently watered until they have made Roots; after which Time they will require no farther Care, but to keep them clear from Weeds. These Cuttings will be rooted enough to bear transplanting in one Year; so the *March* following they should be removed, and planted either in a Nursery, where they may be trained up to Stems, or in the Places where they are designed to remain, which must be in a moist Soil, where they will grow to be large Trees; and being intermixed with other Trees of the same Growth, will make an agreeable Diversity.

PSEUDOACACIA, False Acacia.

To this Article must be added;

1. *PSEUDOACACIA Americana, flore pyramidata coccineo. Plum. Cat.* False Acacia of *America*, with scarlet Flowers, growing in a Pyramid.

2. *PSEUDOACACIA Americana, filiquis alatis. Plum. Cat.* False Acacia of *America*, with winged Pods.

3. *PSEUDOACACIA Americana latifolia, floribus purpureis. Plum. Cat.* False Acacia of *America*, with a broad Leaf, and purple Flowers.

4. *PSEUDOACACIA Americana ingens, fructu coccineo, nigra macula notato. Plum. Cat.* False

Acacia of *America*, with a scarlet Fruit, marked with black Spots.

5. *PSEUDOACACIA Americana, fraxini folio, floribus violaceis. Plum. Cat.* False Acacia of *America*, with an Ash-leaf, and violet-coloured Flowers.

The first, third and fifth Sorts, grow plentifully about *Cartagena* in *New Spain*, as also at *Campechy*: in both these Places they were observed by the late Dr. *William Houstun*, who sent Seeds of these Kinds to *England*.

The second Sort grows plentifully in all the low Lands of *Jamaica*, and is called by the Inhabitants *Dogwood*. The Bark of this Tree, bruised and thrown into standing Waters, where Fish are, will intoxicate them for a time, so that they turn up their Bellies, and float on the Surface of the Water; by which Method the *Indians* and *Negro's* take great Quantities of Fish, which, when caught by this Method, are esteemed very wholesome.

The fourth Sort is also pretty common in most of the *English* Settlements in the *West-Indies*, and in the *Spanish West-Indies* it is very common. The Seeds of this Tree are of a beautiful scarlet Colour, having a large black Spot on the Eye. This was formerly brought into *England* by the Name of *Anacock*.

All these Sorts of false Acacia are very tender Plants, so will not thrive in this Country, unless they are preserved in Stoves. They may be propagated by Seeds, which should be sown early in the Spring, in Pots filled with rich Earth, and plunged into a Hot-bed of Tanners-bark; and when the Plants are come up, they should be each transplanted into a separate Pot, filled with rich Earth, and plunged again into the Hot-bed, being careful to shade them until they have taken new Root; after which Time they should have fresh Air admitted to them every Day, in proportion to the Warmth of the Season, and they must be frequently watered in warm Weather. With this Management the Plants will make good Progress, so that towards the End of *July*, they will have filled the Pots with their Roots; when they should be shifted into other Pots somewhat larger, and may be plunged into the Hot-bed again, where they may remain till towards *Michaelmas*, when they should be removed into the Stove, and plunged into the Bark-bed, where they must be kept warm during the winter Season, and should be frequently refreshed with Water; but it must be given to them in small Quantity in cold Weather. The following Spring these Plants should be shifted into fresh Earth, and if they have made good Progress, they will require Pots a little larger than the former: the Hot-bed in the Stove should also be refreshed with some new Tan at this Season, to renew its Heat, and the Plants plunged therein; which will cause them to push early in the Summer, so that they will have Time to make good Progress before Winter. During the summer Season, the Plants should have a large Share of free Air in warm Weather, and require Plenty of Water; their Leaves should also be frequently washed to cleanse them from Filth, other-

otherwise they will not grow very fast. In two or three Years these Plants will produce their Flowers, when they will make an agreeable Variety amongst other tender exotic Plants in the Stove.

The Seeds of the fourth Sort are so hard as often to remain a whole Year in the Ground, before the Plants appear, especially if the Earth in the Pots be not constantly watered; so that if the Pots are not preserved in a proper Temperature of Heat in Winter, the Seeds will rot: therefore the best Method to make the Seeds vegetate in a short time, is to lay them under a Pot of Earth in the Tan-bed, as hath been directed for the *Bonduc*, and other hard Indian Seeds.

PTARMICA, Sneezwort.

To this Article must be added;

1. PTARMICA *incana humilis, foliis laciniatis, absinthii æmulis.* H. L. Dwarf-hoary Sneezwort, with jagged Leaves, resembling Wormwood.

2. PTARMICA *Alpina, foliis angustis, partim serratis, partim integris.* Bocc. Mus. Alpine Sneezwort, with narrow Leaves, Part of which are sawed on their Edges, and the other Part are whole.

3. PTARMICA *Cretica frutescens, santolinæ faciæ.* Inst. R. H. Shrubby Sneezwort of Crete, with the Appearance of Lavender-cotton.

4. PTARMICA *Orientalis, foliis cristatis.* Tourn. Cor. Eastern Sneezwort, with crested Leaves.

5. PTARMICA *Orientalis, foliis cristatis longioribus, & capitulis majoribus.* Tourn. Cor. Eastern Sneezwort, with longer crested Leaves, and larger Heads.

6. PTARMICA *Orientalis, santolinæ folio, flore majore.* Tourn. Cor. Eastern Sneezwort, with a lavender-cotton Leaf, and a larger Flower.

7. PTARMICA *Orientalis, santolinæ folio, flore minore.* Tourn. Cor. Eastern Sneezwort, with a lavender-cotton Leaf, and a smaller Flower.

8. PTARMICA *Orientalis, foliis tanacetii incanis, flore aureo.* Tourn. Cor. Eastern Sneezwort, with hoary Tansey-leaves, and a golden Flower.

9. PTARMICA *Orientalis, foliis tanacetii incanis, semiflosculis florum pallide luteis.* Tourn. Cor. Eastern Sneezwort, with hoary Tansey-leaves, whose Half-florets are of a pale yellow Colour.

10. PTARMICA *Orientalis, foliis tanacetii incanis, semiflosculis florum brevioribus.* Tourn. Cor. Eastern Sneezwort, with hoary Tansey-leaves, whose Half-florets are very short.

11. PTARMICA *Orientalis, santolinæ folio, radice repente.* Eastern Sneezwort, with a lavender-cotton Leaf, and a creeping Root.

12. PTARMICA *Orientalis, tanacetii folio & faciæ, flore minimo.* Tourn. Cor. Eastern Sneezwort, with the Leaf and Face of Tansey, and the least Flower.

13. PTARMICA *Orientalis incana, foliis pennatis, semiflosculis florum vix conspicuis.* Tourn. Cor. Hoary Eastern Sneezwort, with

winged Leaves, and the Half-florets scarcely discernible.

14. PTARMICA *Orientalis, foliis argenteis conjugatis.* Tourn. Cor. Eastern Sneezwort, with silvery conjugated Leaves.

All these Sorts of *Ptarmica* are hardy enough to endure the Cold of our ordinary Winters in the open Air, provided they are planted in a dry lean Soil; for when they are in a moist rich Soil, they grow very luxuriant in the Summer, and are filled with Juice, which renders them less capable to resist the Cold, than when they are more stunted and woody; and they make a much better Appearance, when they grow slowly, than if they were greatly encouraged in their Growth; because they appear more hoary, and produce a greater Number of Flowers.

They may be all (except the eleventh Sort) propagated by Cuttings in the summer Months, which should be planted in a shady Border of fresh Earth, and must be constantly watered, until they have taken Root; after which Time they will require no farther Care, but to keep them clear from Weeds, until *Michaelmas*, when they should be carefully taken up, and transplanted where they are designed to remain; which must be done so early in the Autumn, that they may have Time to get good Roots, before the Frost comes on, otherwise they will be in Danger of suffering greatly. The eleventh Sort propagates itself by its creeping Roots very fast, so requires to be confined; otherwise it will spread and intermix with whatever Plants grow near it. This is also a very hardy Plant, but being of humble Growth, makes no very good Figure in a Garden; so is seldom preserved, but by those Persons who are curious in Botany, for the sake of Variety.

Altho' these Plants do not produce very beautiful Flowers, yet they may be disposed in large Gardens, so as to make a very agreeable Diversity; for their hoary Leaves of different Shapes, when intermixed with other hardy Plants of the same Growth, on small Hillocks, will have a pretty Effect; and as they retain their Leaves all the Winter, so at that Season they add to the Variety: and in Summer, when their Flowers are produced, they alter the Prospect so as to be very agreeable.

They are all of them low Plants: the tallest and most shrubby of them seldom rises above two Feet high, and the others not half so high, so that they should not be mixed with larger Plants, because those would overbear and destroy them. When these Plants are well rooted, they require no other Culture, but to keep them clear from Weeds; for their Roots will abide many Years, provided they are not destroyed by very severe Frosts, which seldom happen in England.

PULMONARIA, Lungwort.

To this Article must be added;

1. PULMONARIA *vulgaris latifolia, flore albo.* Inst. R. H. Common broad-leaved Lungwort, with a white Flower.

2. PULMONARIA *Alpina, foliis mollibus subrotundis, flore cæruleo.* Inst. R. H. Alpine Lungwort,

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wort, with soft roundish Leaves, and a blue Flower.

3. *PULMONARIA angustifolia, caeruleo flore.* J. B. Narrow-leaved Lungwort, with a blue Flower.

4. *PULMONARIA Alpina, angusto folio, Italica.* Bocc. Musf. Narrow-leaved Alpine Lungwort.

5. *PULMONARIA mitis, fragariae odore.* Bocc. Musf. Mild Lungwort smelling like Strawberries.

6. *PULMONARIA Cretica annua, calyce vesicario.* Inst. R. H. Annual Lungwort of Candy, with a bladder Flower-cup.

7. *PULMONARIA viridi, subrotundo, non maculato folio.* Bocc. Musf. Green Lungwort, with a roundish unspotted Leaf.

8. *PULMONARIA Chia, echii folio verrucoso, calyce vesicario, flore albo.* Tourn. Cor. Lungwort of the Island Scio, with a warted Vipers-bugloss-leaf, a bladdered Flower-cup, and a white Flower.

9. *PULMONARIA Lesbia, echii folio verrucoso, calyce vesicario, flore caeruleo.* Tourn. Cor. Lungwort of Lesbos, with a warted Vipers-bugloss-leaf, a bladdered Flower-cup, and a blue Flower.

10. *PULMONARIA Orientalis, calyce vesicario, foliis echii, flore purpureo infundibuliformi.* Tourn. Cor. Eastern Lungwort, with a bladdered Flower-cup, a Vipers-bugloss-leaf, and a purple funnel-shaped Flower.

11. *PULMONARIA Orientalis, calyce vesicario, foliis echii, flore albo infundibuliformi.* Tourn. Cor. Eastern Lungwort, with a bladdered Flower-cup, a Vipers-bugloss-leaf, and a white funnel-shaped Flower.

The first, second, third, fourth, fifth and seventh Sorts, are abiding Plants, which may be propagated by parting of their Roots: the best Time for doing of this is in Autumn, that they may be rooted before the Frost comes on. They should have a shady Situation, and a fresh undunged Soil, in which they will thrive better than a rich Soil.

The other Sorts are annual, so are propagated only by Seeds. The best Time to sow these is in Autumn, soon after they are ripe; for the Plants will resist the Cold of our Winters very well, so will flower early the following Summer, and good Seeds may be obtained; whereas those which are sown in the Spring, do sometimes miscarry. These Seeds should be sown where they are designed to remain; for the Plants do not succeed very well, when they are transplanted. When the Plants come up, they require no other Culture, but to keep them clear from Weeds; and, where they are too close, to thin them. If these Plants are permitted to scatter their Seeds, the Plants will come up, and be better than when they are sown. All these Plants are preserved by the Curious in Botany, but they have no great Beauty, so are not often kept in other Gardens.

PULSATILLA, Pasque-flower.

To this Article must be added;

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1. *PULSATILLA folio tenuius inciso, & flore minore, five palustris.* C. B. P. Marsh Pasque-flower, with fine-cut Leaves, and a smaller Flower.

2. *PULSATILLA folio tenuius inciso, seu palustris, flore dilutiore.* H. R. Par. Marsh Pasque-flower, with a fine-cut Leaf, and a paler Flower.

3. *PULSATILLA apii folio, vernalis, flore majore.* C. B. P. Spring Pasque-flower, with a smallage Leaf, and a larger Flower.

4. *PULSATILLA apii folio, vernalis, flore minore.* C. B. P. Spring Pasque-flower, with a smallage Leaf, and a smaller Flower.

5. *PULSATILLA apii folio, autumnalis.* C. B. P. Smallage-leaved Pasque-flower, of the Autumn.

6. *PULSATILLA folio anemones secundæ, five subrotundo.* C. B. P. Pasque-flower with a roundish Leaf.

7. *PULSATILLA Pyrenaica, flore albo duplici.* H. R. Par. Pasque-flower of the Pyrenees, with a double white Flower.

8. *PULSATILLA lutea, pastinacæ sylvestris folio.* C. B. P. Yellow Pasque-flower, with a wild Parsnip-leaf.

9. *PULSATILLA Orientalis, tenuissime divisa & villosa, flore rubro.* Tourn. Cor. Eastern Pasque-flower, with a hairy finely-divided Leaf, and a red Flower.

10. *PULSATILLA Africana, multifido flore, apii folio rigido.* Raii Supp. African Pasque-flower, with a multifid Flower, and a stiff smallage Leaf.

All these Sorts (except the last) are very hardy Plants, which may be propagated by Seeds, in the same manner as is directed in the former Volume of the *Gardeners Dictionary*. These should have a pretty strong loamy Soil, and a moist Situation, where they will thrive, and produce their Flowers.

The last Sort is a tender Plant, which must be sheltered in Winter, otherwise it will not live in this Climate. This is also propagated by Seeds, which should be sown, soon after it is ripe, in Boxes or Pots, which should be placed in a shady Situation, and frequently refreshed with Water. In Autumn the Plants will come up, when they should be removed into a Situation where they may have more Sun, and in dry Weather they must be frequently watered. Towards the Middle or latter End of *October*, when the Nights begin to be cold, the Plants must be removed, and placed under a Hot-bed Frame, where they may be screened from hard Frosts; but in mild Weather they should have as much free Air as possible. In the following Spring, the Plants should be transplanted each into a separate Pot filled with fresh undunged Earth, and placed where they may enjoy the Morning Sun, where they should remain all the Season while they are exposed; and in dry Weather they must be frequently watered; and every Winter they should be sheltered under a Frame as before. With this Management the Plants will thrive and flower every Year, and sometimes will produce good Seeds.

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PYROLA,

PYROLA, Winter-green.

The Characters are ;

It hath a rose-shaped Flower, consisting of several Leaves, which are placed circularly: out of whose Cup rises the Pointal ending in a Proboscis, which afterwards turns to a roundish Fruit, which is channelled, generally umbellated, and consisting of five Cells, which are commonly full of small Seeds.

The Species are ;

1. PYROLA rotundifolia major. C. B. P. Great round-leaved Winter-green.

2. PYROLA rotundifolia minor. C. B. P. Small round-leaved Winter-green.

3. PYROLA folio mucronato serrato. C. B. P. Winter-green with a pointed Leaf, sawed on the Edges.

4. PYROLA frutescens, arbuti folio. C. B. P. Shrubby Winter-green, with an Arbutus-leaf.

The first Sort grows wild in many Places in the North of England, on mossy Moors and Heaths, as also in shady Woods, so that it is very difficult to preserve in Gardens, in the Southern Parts.

The other three Sorts are Natives of the Hills, in Germany, Italy, and Hungary. These are all of them very difficult to cultivate in Gardens; for as they grow on very cold Hills, and in a mossy moorish Soil, so when they are removed to a better Soil, and in a warmer Situation, they seldom continue long. The best Time to transplant these Plants into Gardens, is about Michaelmas; when they should be taken up with Balls of Earth to their Roots, and planted in a shady Situation, and on a moist undunged Soil, where they should be frequently watered in dry Weather, otherwise they will not thrive. Some of these Plants may be planted in Pots, which should be filled with Earth as nearly resembling that in which they naturally grow as possible; and place them in a shady Situation, where if they are constantly watered in dry Weather, they will thrive very well.

The Leaves of the first Sort are shaped like those of the Pear-tree, from whence the Name was given to it; these Leaves are of a deep green Colour, and continue most part of the Year; but there is no great Beauty in their Flowers, tho' for Variety they are admitted into many curious Gardens.

The first Sort is ordered by the College of Physicians to be used in Medicine, and is generally brought over from Switzerland, amongst other vulnerary Plants; amongst which Class this Plant is ranged, and by some hath been greatly commended.

PYRUS, The Pear-tree.

To this Article must be added ;

1. L'AURATE, i. e. The Aurate, is an excellent Pear: it ripens the middle of July. It is a large Pear shaped like the Muscat, but is red on the Side next the Sun; this is at present very rare in England.

2. L'EPARQUE, ou BEAU-PRESENT, i. e. The fine Present; it is also called Saint Samson.

This is a large long green Pear, with a Blush of Red next the Sun. The Flesh is breaking, it hath a very long Stalk, and ripens the Beginning of August.

3. LE ROUSSELET DE REIMS, it is an excellent Pear, about the Size of the Katharine, or a little larger; it is russet on the Side next the Sun, and of a brownish yellow Colour on the other Side. It ripens the End of August.

4. L'EPINE D'ETE, i. e. The Summer Thorn. This is a large long Pear, with a smooth green Skin: the Flesh is melting, and somewhat perfumed. This is placed amongst the good Pears. It ripens the Beginning of September.

5. LA POIRE D'OEUF, i. e. The Egg Pear, so named from the Figure of its Fruit, which is shaped like an Egg. This is a large good Pear of a greenish Colour, striped with Red on the Side next the Sun; the Flesh is tender and half-buttery, and hath a high Flavour. This comes from Germany, where it is greatly esteemed. It ripens the Beginning of September.

6. L'ORANGE TULIPPEE. The Orange Tulip is a large round Pear, which is very red on the Side next the Sun, but greenish on the other Side; the Flesh is half-breaking, and a little stony, but hath an agreeable Flavour: it ripens the Beginning of September.

7. LA MANSUETTE. This Pear greatly resembles the Winter Boncretien in its Fruit, Wood, and Leaves, but is smaller at the Eye. It is half-breaking, and hath an agreeable Flavour. It ripens the End of September. This Pear is greatly esteemed in Flanders.

8. LE MUSCAT D'ALLEMAN, i. e. The German Muscat. This is an excellent Pear, more long than round, of the Shape of the Winter-royal; but is less toward the Eye, and is more russet, and of a red Colour next the Sun; it is buttery, melting, and a little musky. This is in Eating in March, April, and sometimes in May, if it keeps so long.

9. LA BERGAMOTTE DE HOLLANDE, i. e. The Hollands Bergamot: it is large and round, of the Shape of the ordinary Bergamot. The Colour is greenish, the Flesh is half-buttery and tender; the Juice is highly flavoured. This is a very good Pear, and will keep till May.

10. LA POIRE DE NAPLES, i. e. The Pear of Naples. This is a pretty large, long, greenish Pear; the Flesh is half-breaking, the Juice is sweet, and a little vinous. It is in Eating in March. I am in Doubt whether this Pear is not in some Places taken for a Saint Germain; for there is a Pear in some Gardens, very like the Saint Germain, which will keep till April, and this Pear agrees with the Characters of that.

The Method of planting and pruning of Pears being fully exhibited in the former Volume of the Gardeners Dictionary, I shall not repeat it in this Place.

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QUERCUS, The Oak-tree.

To this Article must be added ;

1. *QUERCUS*, parva, five *Phagus Græcorum*, & *Esculus Plinii*. C. B. P. The Sweet Oak.
2. *QUERCUS calyce bispido*, glande minore. C. B. P. Oak with small Acorns, having a prickly Cup.
3. *QUERCUS Burgundiaca*, calyce bispido. C. B. P. The Burgundy Oak, whose Acorns have prickly Cups.
4. *QUERCUS pedem vix superans*. C. B. P. Dwarf Oak.
5. *QUERCUS foliis molli lanugine pubescentibus*. C. B. P. Oak with soft woolly Leaves.
6. *QUERCUS gallam exigua nucis magnitudine ferens*. C. B. P. Oak which bears small Galls not larger than Nuts.
7. *QUERCUS foliis muricatis*, non lanuginosis, gallâ superiori simili. C. B. P. Oak with prickly Leaves, which are not woolly, bearing Galls like the former.
8. *QUERCUS foliis muricatis*, minor. C. B. P. Smaller Oak, with prickly Leaves.
9. *QUERCUS latifolia*, magno fructu, calyce tuberculis obsito. Tourn. Cor. Broad-leaved Oak, with large Acorns, whose Cups are beset with Tubercles.
10. *QUERCUS Orientalis*, glande cylindriciformi, longo pediculo insidente. Tourn. Cor. Eastern Oak, with cylindrical Acorns growing on long Footstalks.
11. *QUERCUS Orientalis*, castaneæ folio, glande recondita in cupula crassa & squamosa. Tourn. Cor. Eastern Oak, with a chestnut Leaf, whose Acorns are closely shut up in a thick scaly Cup.
12. *QUERCUS Orientalis angustifolia*, glande minori, cupula crinita. Tourn. Cor. Eastern Oak, with a narrow Leaf, and a smaller Acorn, whose Cup is hairy.
13. *QUERCUS Orientalis latifolia*, glande maxima, cupula crinita. Tourn. Cor. Eastern Oak, with a broad Leaf, and the largest Acorn, whose Cup is hairy.
14. *QUERCUS Orientalis latifolia*, foliis ad costam pulchrè incis, glande maxima, cupula crinita. Tourn. Cor. Eastern broad-leaved Oak, whose Leaves are finely cut to the Stalks, and a very large Acorn, whose Cup is hairy.
15. *QUERCUS Orientalis*, folio subrotundo minori, glande magna striata. Tourn. Cor. Eastern Oak with a smaller roundish Leaf, and a large striated Acorn.
16. *QUERCUS Orientalis*, folio subrotundo, leviter inciso, fructu minori cylindriciformi. Tourn. Cor. Eastern Oak, with a roundish Leaf, lightly cut in, and a smaller cylindrical Fruit.
17. *QUERCUS*, an potius, *Ilex Marilandica*, folio longo angusto salicis. Raii Hist. The swamp willow Oak of Maryland.

18. *QUERCUS sempervirens*, foliis oblongis non sinuatis. Banist. Live Oak.

19. *QUERCUS* (forte) *Marilandica*, folio trifido, ad sassafras accedente. Raii Hist. The black Oak of Maryland.

20. *QUERCUS folio non serrato*, in summitate triangulo. Catesby Hist. Nat. Carolin. The Water Oak.

21. *QUERCUS Caroliniensis*, virentibus venis, muricata. Catesb. Hist. Nat. Carolin. The white Oak of Carolina.

22. *QUERCUS humilior*, salicis folio brevior. Catesb. Hist. Nat. Carolin. Dwarf Highland willow Oak.

23. *QUERCUS esculi divisura*, foliis amprioribus aculeatis. Pluk. Phyt. Red Oak of Maryland.

24. *QUERCUS Mariana*, oleæ folio, glande parvâ compresso, ad apiculam eleganter radiato. Pluk. Mantif. Swamp Spanish Oak.

25. *QUERCUS Mariana*, muricatis castaneæ foliis subtus villosis. Pluk. Mant. Champion chestnut Oak of Maryland.

The eight first-mentioned Sorts grow on the Hills in Spain, Portugal, Germany and Hungary, from whence their Acorns may be obtained ; which should be sown after the manner directed for the common Sorts, in the former Volume of the *Gardeners Dictionary* ; for altho' some of these Sorts naturally grow in Countries which are warmer than England, yet they will thrive as well as the common Sort in the open Air.

The next eight Sorts were discovered by Dr. Tournesort in the Levant, and some of the Sorts have been introduced into the *English Gardens*, where they thrive, and are as hardy as the common Sort.

The other nine Sorts are Natives of the cold Parts of America : most of them grow in New England, Virginia and Maryland, and other Places on the Continent, where the Woods have not been cleared. These most of them delight in a Soil which is moist ; for in dry Land they do not thrive well. They may be propagated by sowing of their Acorns, after the same manner as the common Sort ; but as these must be procured from America, (there being none of these Trees in England which produce Fruit at present) so they should be put up in Sand, soon after they are ripe, and forwarded to England : for all Sorts of Acorns are subject to perish, if they are not planted, or put up in Sand, in a very little Time after they fall from the Trees : so that it is more difficult to transport these Seeds, than those of most other Plants.

When the Acorns arrive, they should be planted as soon as possible ; for if they are good, it will be near two Months from the Time of sowing to the appearing of the Plants ; and the earlier these come up in the Spring, the more Time they will have to get Strength before Winter, so will be in less Danger of suffering from the Cold. For while these Plants are very young and tender, they are often injured by severe Frost ; tho', when they have obtained Strength, they will endure the greatest Cold of our Winters extremely well.

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Therefore, if the first Winter after the Plants come up from Acorns, should prove very severe, it will be proper to screen them from the Frost; which may be done by laying some Branches of Oak, with the decayed Leaves on them, or some dry Fern or Furze over them, which will prevent the Frost from penetrating very deep in the Ground; and these lying hollow, will admit a sufficient Quantity of Air to the Plants, to prevent their taking the Mould, which is very injurious to them. After the first Year, these Sorts may be treated in the same manner as the common Oak, by transplanting them into Nurseries, or the Places where they are to remain.

These Sorts of Oak are all of them inferior to the common Sort of our own Growth, in regard to their Timber, so should not be cultivated for that Purpose: but as some of them have large beautiful Leaves, so they make an agreeable Variety, when mixed with other Trees in Gardens, and other small Plantations. And as some of these Sorts are of very humble Growth, so they may be planted for Underwood, in such Plantations where they will have a good Effect; and many of the Sorts continue green throughout the Year, which renders them more valuable; and those Sorts whose Leaves are downy underneath, make a most agreeable Prospect, when viewed at a Distance; for as the Wind turns up the Leaves, so they appear to be covered over with Silver; and these Trees rise to a great Height. There is one of the fifth Sort growing at Ragnal near Tucksford in Nottinghamshire, which is upward of forty Feet high, and produces a great Number of Acorns almost every Year, from whence several Plants have been raised. But these Acorns being so closely shut up in their Cups, do not ripen well in a cold wet Season.

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The Characters are;

It hath a Flower consisting of one Leaf, whose lower Part is tubulous, but the upper Part is expanded, and for the most part divided into five Segments; the Flower is succeeded by an oval Fruit, having but one Cell, which is filled with flat cartilaginous Seeds surrounded by a Pulp.

There is but one Species of this Plant at present known; (viz.)

RANDIA frutescens, spinis bijugis, foliis subrotundis, floribus albis. Houst. Shrubby Randia, with Spines growing two at a Joint, roundish Leaves, and white Flowers. This Plant is figured and described by Sir Hans Sloane in his History of Jamaica, under the Title of *Lycium forte, foliis subrotundis integris, spinis & foliis ex adverso sitis*. Vol. I. p. 40.

This Shrub grows plentifully about *La Vera Cruz*, from whence the Seeds were sent by the late Dr. William Houstoun, who gave this Name to it, in Honour to Mr. Isaac Rand, a curious Botanist.

This Shrub rises to the Height of ten or twelve Feet in the Country of its Growth, and divides into a great Number of Branches, which are always produced by Pairs opposite, as are also the Leaves and Spines. The Flowers are small, and of a white Colour, which are succeeded by hard oval-shaped Fruit, about the Size of a large Spanish Nut, which is full of flat Seeds inclosed in a soft blackish Pulp.

It is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark, observing to water the Earth frequently to promote the Vegetation of the Seeds. When the Plants come up, they must have fresh Air admitted to them every Day, when the Weather is warm, and they must be often refreshed with Water. In about a Month's time after the Plants come up, they will be fit to transplant; when they should be carefully shaken out of the Pots, and each planted into a separate small Pot filled with light fresh Earth, and then plunged into the Hot-bed again; where they must be screened from the Sun until they have taken new Root, after which Time they must have Air and Moisture in proportion to the Warmth of the Season. The Plants may remain in the Hot-bed till toward Michaelmas, when the Nights begin to be cold; at which time they should be removed into the Stove; and if they are plunged in the Bark-bed, it will greatly forward their Growth, tho' they will live in the dry Stove, if they are kept in a moderate Temperature of Heat, and are frequently watered. During the two first Seasons, while the Plants are young, it will be proper to keep them constantly in the Stove (but then their Leaves must be washed, whenever they contract Filth); which will bring them forward: but after the Plants have obtained Strength, they may be exposed every Summer to the open Air, provided they are placed in a warm Situation: but in Winter they must be constantly placed in a Stove, and kept in a moderate Warmth; otherwise they will not live in this Country.

The Leaves of this Plant continue green throughout the Year, which renders the Plant valuable, because it makes an agreeable Variety in the winter Season, when mixed with other tender Plants. Sir Hans Sloane found this Plant in the Island of Barbados.

RAPUNCULUS, Rampions.

The Characters are;

The Flower consists of one Leaf, in its Form approaching to a Bell-shape; but is so expanded and cut, that it almost represents the Figure of a Star. The Pointal is commonly split into two horned Divisions, and the Flower-cup becomes a Fruit, which is divided into three Cells, inclosing many small Seeds.

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The Species are ;

1. *RAPUNCULUS spicatus*. C. B. P. Spiked Rampion.
2. *RAPUNCULUS spicatus albus*. C. B. P. Spiked Rampion, with a white Flower.
3. *RAPUNCULUS Alpinus corniculatus*. C. B. P. Horned Rampion of the Alps.
4. *RAPUNCULUS scabiosæ capitulo cæruleo*. C. B. P. Rampions with blue scabious-like Heads.
5. *RAPUNCULUS scabiosæ capitulo albo*. C. B. P. Rampion with white scabious-like Heads.
6. *RAPUNCULUS spicatus, flore flavescente*. Inst. R. H. Spiked Rampion, with a yellowish Flower.
7. *RAPUNCULUS Creticus, seu pyramidalis altera*. C. B. P. Pyramidal Rampion of Crete.
8. *RAPUNCULUS folio gramineo*. Inst. R. H. Grass-leaved Rampion.
9. *RAPUNCULUS Creticus petromarula, flore albo*. Tourn. Cor. Rampion of Crete, with a white Flower.
10. *RAPUNCULUS Orientalis, foliis angustis dentatis*. Tourn. Cor. Eastern Rampion, with narrow indented Leaves.
11. *RAPUNCULUS Orientalis angustifolius multicaulis totus floridus*. Tourn. Cor. Eastern narrow-leaved Rampion, with many Stalks, filled with Flowers.
12. *RAPUNCULUS Orientalis, campanulæ pratensis folio*. Tourn. Cor. Eastern Rampion, with a meadow Bellflower-leaf.
13. *RAPUNCULUS Orientalis, foliis longioribus, asperis & rigidis*. Tourn. Cor. Eastern Rampion, with longer rough stiff Leaves.
14. *RAPUNCULUS Orientalis altissimus, foliis glabris & rigidis*. Tourn. Cor. The tallest Eastern Rampion, with smooth stiff Leaves.
15. *RAPUNCULUS Orientalis, hesperidis folio*. Tourn. Cor. Eastern Rampion, with a Dames-violet-leaf.

These are all of them hardy Plants, which will thrive in the open Air: they are propagated by Seed, which should be sown in Autumn; for if they are kept out of the Ground till the Spring, they frequently fail. These Seeds should be sown on a Bed of fresh undunged Earth, where they are designed to remain; for they do not thrive so well when they are transplanted. Therefore the best Method is, to make small Drills cross the Bed, about eighteen Inches asunder, and sow the Seeds therein: then cover them lightly over with Earth; for if they are buried too deep, they will rot in the Ground. In about a Month after the Seeds are sown, the Plants will come up; when they should be diligently weeded, which is all the Care they will require till Spring; at which Time the Plants should be thinned where they are too close; so as to leave them six or seven Inches apart in the Rows; and afterwards they require no farther attention but to keep them clear from Weeds. In June the Plants will flower, and if the Summer prove favourable, they will produce ripe Seeds.

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As these Plants do not continue above two or three Years, so there should be Seeds sown every other Year, to continue the Sorts; for they are Plants which require little Trouble to cultivate them, and their Flowers make a pretty Variety in large Gardens; therefore they should be allowed a Place amongst other hardy Flowers.

RAPUNTIIUM, Cardinal Flower.

To this Article must be added;

1. *RAPUNTIIUM Americanum, floribus albis*. Inst. R. H. American Cardinal Flower, with white Flowers.
2. *RAPUNTIIUM Americanum, coccineo flore, lineis albis eleganter picto*. Inst. R. H. American Cardinal Flower, with a scarlet Flower, elegantly striped with White.
3. *RAPUNTIIUM Americanum altissimum, foliis cirsi, flore virescente*. Plum. Cat. The tallest American Cardinal Flower, with Leaves like the Melancholy-thistle, and greenish Flowers.
4. *RAPUNTIIUM Americanum, foliis cirsi lucidis, flore multiplici coccineo conglobato*. Plum. Cat. American Cardinal Flower, with shining melancholy-thistle Leaves, and many scarlet Flowers growing in Clusters.
5. *RAPUNTIIUM Americanum, trachelii folio, flore purpurascens*. Plum. Cat. American Cardinal Flower, with a throatwort Leaf, and a purplish Flower.
6. *RAPUNTIIUM Americanum, foliis oblongis, floribus parvis cæruleis, spicâ longissimâ*. American Cardinal Flower, with oblong Leaves, and small blue Flowers, growing in a long Spike.
7. *RAPUNTIIUM urens Soloniense*. Mor. H. R. Blæfs. Burning Cardinal Flower of Blois.
8. *RAPUNTIIUM urens, flore purpureo-cæruleo*. Inst. R. H. Burning Cardinal Flower, with a blueish purple Flower.
9. *RAPUNTIIUM Africanum minus angustifolium, flore violaceo*. Inst. R. H. Lesser narrow-leaved African Cardinal Flower, with a violet-coloured Flower.
10. *RAPUNTIIUM Æthiopicum, violaceo galeato flore, foliis pinastri*. Breyn. Cent. Ethiopian Cardinal Flower, with a violet galeated Flower, and Leaves like the Pinafter.
11. *RAPUNTIIUM Æthiopicum, cæruleo galeato flore, foliis coronopi*. Breyn. Cent. Ethiopian Cardinal Flower, with a blue galeated Flower, and Leaves like Buckshorn Plantain.
12. *RAPUNTIIUM Æthiopicum, cæruleo galeato flore, foliis dentatis*. Breyn. Cent. Ethiopian Cardinal Flower, with a blue galeated Flower, and indented Leaves.
13. *RAPUNTIIUM Canadense pumilum, linariæ folio*. Sarrac. Low Canady Cardinal Flower, with a toad-flax Leaf.
14. *RAPUNTIIUM Creticum minimum, bellidis folio, flore maculato*. Tourn. Cor. The least Cardinal Flower of Crete, with a daisy Leaf, and a spotted Flower.

Most of these Sorts are biennial Plants, which commonly perish when they have produced Seed; so should be sown every Year, in

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order to continue a Succession of them to flower annually. The fifth Sort is an annual Plant, which flowers and seeds the same Summer it is sown, and soon after perishes. If the Seeds of this Kind are permitted to scatter in the Pots, and the Pots kept in the Stove, the Plants will come up in Autumn, and flower early the following Spring.

The Seeds of the other Sorts should be sown in Pots filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, and should be frequently watered; otherwise the Seeds will remain in the Earth several Months, before the Plants will appear; and sometimes I have known the Seeds remain in the Earth a whole Year, and the Plants have come up the following Spring. When the Plants come up, they should be transplanted each into a separate small Pot, and plunged into the Hot-bed again to bring them forward; but in *June* they should be inured to bear the open Air by degrees, and toward the End of that Month, they may be removed out of the Hot-bed, and placed in a warm Situation, where they may have the morning Sun, and must be constantly watered in dry Weather. In this Place they may remain till *October*, when they should be placed under a common Hot-bed Frame, where they should have as much free Air as possible in mild Weather; but must be covered in frosty Weather, otherwise they will not live in this Country. The Spring following the Plants must be shifted into larger Pots, and placed abroad again in a sheltered Situation, and duly watered, otherwise they will not flower very strong. In *July* the Plants will produce their Flowers, and if the Autumn proves favourable, they will perfect their Seeds.

RAUVOLFIA.

The Characters are;

It hath a tubulous Flower consisting of one Leaf, whose upper Part spreads open into a plain Surface, and is cut into several Parts; from whose Cup arises the Pointal, fixed like a Nail, which afterward becomes an almost globular soft Fruit, full of Milk, in which are contained one or two hard Seeds.

The Species are;

1. RAUVOLFIA *tetraphylla angustifolia*. Plum. Nov. Gen. Four-leaved Rauwolfia, with narrow Leaves.

2. RAUVOLFIA *tetraphylla latifolia*. Plum. Nov. Gen. Four-leaved Rauwolfia, with broad Leaves.

This Name was given to this Genus of Plants by Father Plumier, who was the Person that discovered them in *America*, in Honour to Leonard Rauwolf, who was a curious Botanist, and flourished about the Year 1583. He travelled into the *Holy-land*, and several other Places in the East, and published his Travels in *Higb-Dutch*, which were translated into *English* under the Inspection of the great Mr. Ray.

These Plants grow plentifully at *Campechy*, from whence I received their Seeds, which were collected by Mr. Robert Millar, Surgeon.

The Seeds of these Plants should be sown in Pots filled with fresh Earth, and plunged into a Hot-bed of Tanners-bark; for as they are very hard, so they frequently remain a long time in the Ground: therefore when they are in Pots, they may be shifted from one Bed to another, as their Heat decays. When the Plants come up, they must be frequently refreshed with Water, but it must not be given them in large Quantities; for the Plants are succulent, and full of a milky Juice, so are in Danger of rotting with too much Moisture. They should also have a large Share of fresh Air admitted to them in warm Weather; and when they are about two Inches high, they should be transplanted each into a separate small Pot, filled with fresh light Earth, and then plunged into the Hot-bed again; observing to shade them from the Sun, until they have taken new Root; after which Time they should have free Air admitted to them every Day, in proportion to the Warmth of the Season, and they must be often refreshed with Water. In this Hot-bed the Plants may remain till toward *Michaelmas*, when they should be removed into the Stove, and plunged into the Tanners-bark, where they must be kept warm, and not have too much Moisture in cold Weather, lest it rot them.

As these Plants are Natives of very hot Countries, so they will not live in the open Air in *England*; therefore they should constantly remain in the Stove; and if they remain in the Bark-bed, they will thrive much faster, than when they are placed on Stands in a dry Stove. But in the summer Season, they should have a large Share of fresh Air admitted to them, and the Leaves of the Plants must be now and then washed with a Sponge, to clear them from the Filth they are apt to contract, which, if suffered to remain, will retard the Growth of the Plants. Where this Care is taken of them, they will thrive very fast, and the second Year will produce Flowers, and continue so to do for many Years; but as yet they have not perfected their Seeds in *England*. They may also be propagated by Cuttings, which should be laid to dry for two or three Days before they are planted; and then should be plunged into a moderate Hot-bed of Tanners-bark, observing to shade them until they have taken Root; after which Time they may be treated as the seedling Plants.

RESEDA, Bastard-rocket.

The Characters are;

It hath a polypetalous anomalous Flower, composed of several dissimilar Petals, out of whose Cup arises the Pointal, which afterward becomes a membranaceous Fruit, for the most part three or four-cornered, oblong, and, as it were cylindrical, pregnant with roundish Seeds.

The Species are;

1. RESEDA *vulgaris*. C. B. P. Common Bastard-rocket.

2. RESEDA *crispa Gallica*. Bocc. Rar. Pl. Curled French Bastard-rocket.

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3. *RESEDA latifolia, flore flavo.* Mor. Hist. Broad-leaved Bastard-rocket, with a yellow Flower.

4. *RESEDA foliis calcitrapæ, flore albo.* Mor. H. R. Blasf. Bastard-rocket, with Star-thistle-leaves, and a white Flower.

5. *RESEDA minor vulgaris.* Inst. R. H. Smaller common Bastard-rocket.

6. *RESEDA minor vulgaris, folio minus inciso.* Inst. R. H. Smaller common Bastard-rocket, with a Leaf less cut.

7. *RESEDA minor vulgaris, foliis integris.* Inst. R. H. Small common Bastard-rocket, with whole Leaves.

8. *RESEDA Pyrenaica, linariæ folio glauco.* Schol. Bot. Pyrenean Bastard-rocket, with a glaucous toad-flax Leaf.

These Plants are preserved in the Gardens of some Persons, who are curious in Botany; but at present they are not used in Medicine. They are all of them very hardy Plants, which are propagated by Seeds, which should be sown in the Spring, on an open Bed of fresh undunged Earth, in the Place where they are designed to remain; and when the Plants come up, they should be houghed to separate them, where they are too close, as also to destroy the Weeds. The four first Sorts should be allowed eighteen Inches or two Feet; but the other Sorts, being of less Growth, do not require above half that Room. The Weeds should be constantly houghed down between the Plants when they arise, which is all the Culture the Plants require. Some of these Plants will flower the same Year they are sown, when they come up early in the Spring; but in general they do not flower till the second Year, when they produce their Seeds, and the Plants commonly perish soon after. If the Seeds of these Plants are permitted to scatter, the Plants will come up, and stock the Ground, so as to become Weeds.

RHAMNUS, The Buckthorn.

To this Article must be added;

1. *RHAMNUS catharticus minor, folio longiori.* Inst. R. H. Lesser purging Buckthorn, with a longer Leaf.

2. *RHAMNUS tertius, flore herbaceo, baccis nigris.* C. B. P. Clusius's third Buckthorn, with an herbaceous Flower, and black Berries.

3. *RHAMNUS Hispanicus, buxi folio ampliore.* Inst. R. H. Spanish Buckthorn, with a larger Box-leaf.

4. *RHAMNUS Hispanicus, oleæ folio.* Inst. R. H. Spanish Buckthorn, with an Olive-leaf.

5. *RHAMNUS Hispanicus, hyperici folio.* Inst. R. H. Spanish Buckthorn, with a St. Johns-wort Leaf.

6. *RHAMNUS Creticus, amygdali folio minori.* Tourn. Cor. Candy Buckthorn, with a smaller almond Leaf.

7. *RHAMNUS Orientalis, alaterni folio.* Tourn. Cor. Eastern Buckthorn, with an alaternus Leaf.

8. *RHAMNUS Creticus, buxi folio minori.* Tourn. Cor. Candy Buckthorn, with a smaller box-tree Leaf.

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9. *RHAMNUS Orientalis, amygdali folio ampliore.* Tourn. Cor. Eastern Buckthorn, with a larger almond Leaf.

These Plants are all of them Natives of warmer Countries than England; but yet they are hardy enough to thrive in the open Air very well, if they are planted in sheltered Situations: and as they are Shrubs of moderate Growth, so they may be admitted to have a Place in wilderness Quarters, where they will live under taller Trees, and add to the Variety.

They may be propagated either by Seeds, which should be sown soon after they are ripe; or by laying down of the tender Branches, in the same manner as hath been directed in the former Volume of the *Gardeners Dictionary* for the common Sort.

But if these Plants are raised from Seeds, they will require a little Care the first Winter, if the Frost should prove severe; in which Case there should be some dry Fern or Oak-branches with their Leaves on, laid over them; which will protect them from the Frost, and at the same Time admit Air to the Plants, to prevent their growing mouldy; which oftentimes destroys the tender Parts of Plants, when the Air is too much excluded from them.

The first Sort here enumerated seldom rises above four or five Feet high; but most of the other Sorts will grow to the Height of ten or twelve Feet, and divide into many Branches, so as to form large Shrubs; and being different in their Leaves from each other, they make an agreeable Variety; for which reason they are preserved by such Persons as delight in hardy Trees and Shrubs.

RHUS, Sumach.

To this Article must be added;

1. *RHUS Americanum, paniculâ sparsâ herbaceâ, ramis patulis glabris.* Horth. Elt. American Sumach, with a loose herbaceous Panicle, and low smooth Branches.

2. *RHUS folio ulmi.* C. B. P. Elm-leaved Sumach.

The first of these Plants was brought from North Carolina, and I have since received the Seeds of this Kind from Pennsylvania, where it grows in great Plenty. This Sort doth not grow very large, being seldom above six or eight Feet high; but divides into several Branches, which grow more regular than most of the other Sorts; and the Flowers are produced on the Tops of the Branches, which are in very large loose Panicles, and of a yellowish green Colour. The tender Shoots of this Plant are of a purplish Colour, and smooth; and the Leaves are smooth, having a great Number of Pinnæ on each.

The second Sort grows plentifully in the South of France, and in Spain; but is at present pretty rare in England. This Sort is directed by the College of Physicians to be used in Medicine; and in the South of France, it is used instead of Oak-bark for tanning of Leather.

Both these Sorts are very hardy Plants, which will live in the open Air in England, and

and are very proper to plant with other hardy Shrubs in Quarters of Wilderness-work, where they will make an agreeable Variety. These may be propagated by Seeds, or from Suckers or Layers, after the same manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for the common *Virginian Sumach*.

RICINOIDES, Physic-nut.

To this Article must be added:

1. *RICINOIDES frutescens, althææ folio.* Plum. Cat. Shrubby Physic-nut, with a Marsh-mallow-leaf.
2. *RICINOIDES foliis populi hirsutis.* Plum. Cat. Physic-nut with hairy Poplar-leaves.
3. *RICINOIDES frutescens, linariæ foliis obtusis.* Plum. Cat. Shrubby Physic-nut, with blunt Toad-flax-leaves.
4. *RICINOIDES folio citrii, argenteo polline consperso.* Plum. Cat. Physic-nut, with a Citron-leaf, powdered over with Silver.
5. *RICINOIDES oleagni folio.* Plum. Cat. Physic-nut, with a Wild-olive-leaf.
6. *RICINOIDES verbasci folio.* Plum. Cat. Physic-nut, with a Mullein-leaf.
7. *RICINOIDES castaneæ folio.* Plum. Cat. Physic-nut, with a Chestnut-leaf.
8. *RICINOIDES herbaceum, foliis trifidis vel quinquefidis & serratis.* Houst. Herbaceous Physic-nut, with three or five-sawed Leaves.
9. *RICINOIDES folio subrotundo serrato, fructu parvo conglomerato.* Houst. Physic-nut with a roundish-sawed Leaf, and small Fruit, growing in Clusters.
10. *RICINOIDES palustre, fructu hispido, foliis subrotundis, nervosis & asperis.* Houst. Marsh Physic-nut, with a prickly Fruit, and roundish ribbed Leaves, which are rough.
11. *RICINOIDES frutescens, lauri folio, calyce amplissimo viridi.* Houst. Shrubby Physic-nut, with a Bay-leaf, and a large green Flower-cup.
12. *RICINOIDES, ex qua paratur Tournesol Gallorum.* Inst. R. H. App. Physic-nut, from which the *Tournesol* of the French is made.

The seven first-mentioned Sorts were discovered by Father Plumier in *America*: the first and second Sort have been found growing plentifully in the Island of *Jamaica*: the third, fifth, sixth, seventh, eighth, ninth and tenth Sorts, were found in Plenty about *La Vera Cruz*, by the late Dr. William Houstoun, from whence he sent their Seeds to *England*: the eleventh Sort was also discovered by the same Gentleman at *Jamaica*. All these Sorts are very tender Plants, being Natives of very warm Countries, and require to be tenderly treated, otherwise they will not grow in this Country. The second, seventh, eighth, ninth and tenth Sorts, are annual, so their Seeds must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be transplanted each into a separate small Pot, filled with light rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to shade them, until they have taken Root; and then they should have fresh Air ad-

mitted to them by raising of the Glasses every Day in warm Weather, and they must be frequently watered. In about a Month's Time, the Plants will have filled these Pots with their Roots, when they should be shaken out, and put into larger Pots filled with rich Earth, and plunged again into the Hot-bed, provided there is Room for the Plants to grow in Height, without being pressed by the Glasses; in which Case it will be proper to put them into the Bark-bed in the Stove; for they are too tender to thrive in the open Air in this Country, in the warmest Season of the Year. In July these Plants will flower, and their Seeds will ripen in August and September, soon after which Time the Plants will decay.

The other Sorts which live over the Year, must be raised in the same manner as the annual Kinds; but in Winter they must be plunged into the Bark-bed, in the warmest Stove, and treated after the same manner as hath been directed in the former Volume of the *Gardeners Dictionary* for those Sorts which are there enumerated.

The twelfth Sort, is an annual Plant, and is found wild in the South of *France*, *Spain* and *Italy*, from which the *Tournesol* is made, that is used for colouring of Wine and Jellies. This is made of the Juice which is lodged between the outer Cover and the Seeds; and, if rubbed on Cloth, at first appeareth of a lively green Colour, but soon changeth to a bluish purple Colour: if these Cloths are put into Water, and afterward wrung, they will colour the Water of a claret Colour. The Rags, thus dy'd, are brought to *England*, and sold in the Druggists Shops, by the Name of *Turnsole*.

This Sort may be propagated by Seeds, which should be sown in the Autumn, soon after they are ripe, on a warm Border of fresh light Earth; and if any of the Plants come up before Winter, (which sometimes happens) they should be sheltered in hard Frost, otherwise they will not live thro' the Winter. But the Seeds generally remain in the Ground until the Spring, when the Plants will appear; at which Time they should be cleaned from Weeds, and where the Plants are too close, they should be thinned, so as to leave them about six Inches asunder; and in very dry Weather, if they are now and then refreshed with Water, it will promote their Growth. This is all the Culture they require, except the keeping them constantly clear from Weeds; for the Plants do not thrive well, if they are transplanted; so they should be sown where they are designed to remain. In July the Plants will flower, and their Seeds will ripen in August, when the Plants will soon after decay.

RICINUS, Palma Christi or Oil-seed.

To this Article must be added;

1. *RICINUS Indicus, fructu rugoso non echinato.* Indian Oil-seed, with a rough Fruit not echinated.
2. *RICINUS Americanus, fructu racemoso hispido.* John. Dend. American Oil-seed, with prickly Fruit, growing in a Cluster.

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3. *RICINUS Americanus, fructu racemoso glabro majore*. Millar. American Oil-seed, with larger smooth Fruit growing in a Cluster.

4. *RICINUS Americanus minor, fructu racemoso glabro*. Millar. Smaller American Oil-seed, with smooth Fruit, growing in Clusters.

5. *RICINUS Zeylanicus, foliis profundius laciniatis*. Inst. R. H. Oil-seed of Ceylon, with Leaves deeply cut in.

6. *RICINUS bumilis, foliis subrotundis serratis, & subtus argenteis, flore fructuque conglomeratis*. Houst. Dwarf Oil-seed, with roundish sawed Leaves, which are silvery underneath, and the Flowers and Fruit growing in Bunches.

The Seeds of the first Sort were brought from the *East-Indies*, which came up and flourished in the Physic-garden at *Chelsea*. This Sort grows about the same Height as the common Kind, but the Leaves are not so deeply divided. The Coverings of the Seeds are not prickly, as in most of the other Sorts (somewhat resembling the outer Cover of the Chestnut); but are rough, and full of Protuberances.

The Seeds of the second and third Sorts were sent from *Jamaica* by Mr. Robert Millar, who gathered them on the North-side of that Island. These Plants grow in their native Country, to be eighteen or twenty Feet high, and continue two or three Years. They are nearly alike in their outward Appearance, but differ in the Covering of their Seeds, the second having prickly Covers, and the third being smooth.

The fourth Sort is a low Plant, seldom rising above three Feet high, and differs from the common small Sort, in having smooth Covers to the Seeds: this is less common, and hath not been remark'd by any Botanical Writer.

The fifth Sort is a Native of *Ceylon*, from whence the Seeds were brought to *Holland*, and hath been cultivated in many curious Gardens. The Leaves of this Kind are very deeply jagged, in which it chiefly differs from the common Sort.

The sixth Sort was discovered by the late Dr. William Houstoun at *Campechy*, from whence he sent the Seeds to *England*. This is a very low Plant, seldom rising above eight or nine Inches high, and perishes soon after the Seeds are perfected.

All these Sorts are propagated by Seeds, which must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be treated in the same manner as is directed in the former Volume of the *Gardeners Dictionary*, for the *Species* there enumerated; with which Management these will thrive very well, except the last Sort, which is a tender Plant, so will not perfect Seeds in the open Air in this Country: therefore this Sort should remain in the Hot-bed, and in warm Weather the Glasses should be raised to admit fresh Air to the Plants, and they must be frequently watered, otherwise their Seeds will not be well nourished.

The second and third Sorts here mentioned will not perfect their Seeds in this Climate the first Year, unless they are placed in the Stove,

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and forwarded early in the Spring; so that it will be proper to preserve a Plant or two of each Kind thro' the Winter, in order to obtain good Seeds. But as they are tender Plants, so they must be kept in a moderate Temperature of Warmth, otherwise they will not live; therefore the best Way is to plunge the Pots into the Bark-bed in the Stove, which will keep them growing all the Winter, and cause them to make large handsome Plants by the following Summer.

RONDELETIA.

The Characters are;

It hath a salver-shaped Flower, consisting of one Leaf, which is tubulous, and rests on the Empalement; which Empalement afterwards becomes a roundish coronated Fruit, divided into two Cells, containing many small Seeds.

We know but one Species of this Plant; which is,

RONDELETIA arborescens, tini facie. Plum. Nov. Gen. Tree-like *Rondeletia*, with the Face of *Laurus Tinus*.

This Plant was discovered by Father Plumier, in *America*, who gave it this Name in Honour to *Gulielmus Rondeletius*, a famous Physician of *Montpelier*.

The Seeds of this Plant were sent to *England* by Mr. Robert Millar, Surgeon, who collected them on the North-side of the Island of *Jamaica*, where the Trees grow plentifully, as also in several Parts of the *Spanish West-Indies*.

This Plant is very tender, so cannot be preserved in *England*, unless it is kept in a warm Stove. It is propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they must be transplanted into separate small Pots, and plunged into a moderate Hot-bed of Tanners-bark, where they must be treated in the same manner as hath been directed for the *Pereskia*; and in Winter, must be placed in the Tan-bed in the Stove, where these Plants will thrive, and in two or three Years will flower; when they will make an agreeable Variety amongst other tender exotic Plants.

ROSA, The Rose-tree.

To this Article must be added;

1. *ROSA sylvestris Virginiana, flore majore pallido*. The wild *Virginian* Rose, with a larger pale Flower.

2. *ROSA Americana moschata, flore minore*. The *American* Musk-rose, with a smaller Flower.

3. *ROSA Americana odoratissima serotina, flore pallido pleno*. The most sweet-scented *American* late-flowering Rose, with a double Flower.

These three Sorts of Roses grow wild in the Woods of *North America*, from whence their Seeds have been sent to *England*, and great Numbers of the Plants have been raised. They are extremely hardy, so may be planted in any Situation, but they love a moist light Soil. They may be propagated by Layers or Suckers, in the same manner as the common

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Sorts of Roses ; and being intermixed with them, they will add to the Variety. There is some Variation in the Colour of the Flowers of these Sorts, which hath arisen from the Seeds which were brought over, as there frequently happens with all the other Sorts of Roses ; for of late Years, since some curious Persons have sowed the Seeds of Roses, there have been many new Varieties obtained, some of which are very double, and of beautiful Colours ; which Success should encourage others to practise this Method, since there is not a more beautiful Genus of Plants in Nature, than that of the Rose ; and the greater Variety there can be obtained, the more will they be valued, on account of their several Successions, whereby they are, one or other of the Species, in Flower above five Months.

RUBEOLA, Petty-madder.

The Characters are ;

It hath a funnel-shaped Flower, consisting of one Leaf, which is slightly cut into four Parts at the Brim ; resting on the Empalement, which is sometimes double, and sometimes single. This Empalement afterward becomes a Fruit, composed of two naked Seeds.

The Species are ;

1. *RUBEOLA latiori folio.* Inst. R. H. Broad-leaved Petty-madder.

2. *RUBEOLA angustiore folio.* Inst. R. H. Narrow-leaved Petty-madder.

3. *RUBEOLA vulgaris quadrifolia laevis, floribus purpurascens.* Inst. R. H. Common smooth four-leaved Petty-madder, with purplish Flowers, commonly called Squinency-wort.

4. *RUBEOLA Lusitanica aspera, floribus purpurascens.* Inst. R. H. Rough Petty-madder of Portugal, with purplish Flowers.

5. *RUBEOLA Cretica saxatilis fruticosa, galii folio, flore purpureo violaceo.* Tourn. Cor. Shrubby rock Petty-madder of Candy, with a ladies-bedstraw Leaf, and a violet purple Flower.

6. *RUBEOLA Cretica saxatilis frutescens, flore flavescens.* Tourn. Cor. Shrubby rock Petty-madder of Candy, with a yellowish Flower.

7. *RUBEOLA Cretica foetidissima frutescens myrtifolia, flore magno suave-rubente.* Tourn. Cor. The most stinking shrubby Petty-madder of Candy, with a myrtle Leaf, and a large pale red Flower.

8. *RUBEOLA Orientalis foetida fruticosa serpyllifolia, flore parvo suave-rubente.* Tourn. Cor. Shrubby stinking Eastern Petty-madder, with a mother-of-thyme Leaf, and a small pale red Flower.

9. *RUBEOLA Orientalis, foliis gallii, flore multiplici ex viridi flavescens.* Tourn. Cor. Eastern Petty-madder, with many greenish yellow Flowers.

The first, second, fourth and ninth Sorts, are annual Plants, which decay soon after they have perfected their Seeds. These are preserved in the Gardens of those Persons who are curious in Botany, for the sake of Variety. They are very hardy Plants, which require no other Care than to clear them from Weeds :

for if they are permitted to scatter their Seeds, the Plants will come up and maintain their Place, if they are not overborne with larger Plants. The Seeds of these Plants may be sown either in Spring or Autumn, in the Places where they are to remain, which may be in almost any Soil, but they love an open Situation.

The third Sort grows wild on chalky Hills in divers Parts of England, where the Branches trail on the Ground, and produce Tufts of purplish Flowers from the Joints where the Leaves are set on, which open in June, and the Seeds are ripe in August ; but the Roots abide many Years. This Plant is esteemed efficacious in the Cur of Quinsys, either taken inwardly, or outwardly applied.

The fifth, sixth, seventh and eighth Sorts, were discovered by Dr. Tournefort in the Levant. These are abiding Plants, which become shrubby, and by their different Appearances, make an agreeable Variety in a Garden. They may be propagated by sowing of their Seeds on a Bed of fresh undunged Soil, in the Spring ; and when the Plants come up, they must be kept clear from Weeds, and in very dry Weather they should be refreshed with Water ; and when the Plants are about three or four Inches high, they should be transplanted, some of each Sort, into Pots, that they may be sheltered under a Hot-bed Frame in Winter ; and the others into dry warm Borders of poor Earth : for in such Places where the Plants grow slowly, they will live thro' the Winter, better than when they are planted in a rich Soil.

RUBUS, The Bramble.

To this Article must be added ;

1. *RUBUS vulgaris, spinis carens.* H. R. Par. Common Bramble, without Spines.

2. *RUBUS spinosus, foliis & flore eleganter laciniatis.* Inst. R. H. Prickly Bramble, with Leaves and Flowers elegantly jagged.

3. *RUBUS flore albo pleno.* H. R. Par. The Bramble with double white Flowers.

4. *RUBUS non spinosus, fructu nigro majore, Polonicus.* Barr. Icon. Poland Bramble without Thorns, and a larger black Fruit.

The first Sort is in all respects like the common Bramble, excepting in this Particular, that there are no Thorns on the Branches or Leaves of this Sort.

The second Sort differs from the common Bramble, in having the Leaves and Flowers curiously jagged.

The third Sort produces large Spikes of Flowers, which are very large and double, so that they make a fine Appearance, being almost as large and double as Roses. This merits a Place in every good Garden, because it may be planted in any abject Part of the Garden, under Trees in wilderness Quarters, where it will thrive and flower as well as when planted in a more open Situation.

The fourth Sort is not very common in England, but is a Native of Poland. This produces much larger Fruit than the common Bramble ; so is preserved in the Gardens of some

some curious Persons for the sake of Variety.

All the Sorts of Bramble are easily propagated by laying down of their Shoots, which in one Year will be sufficiently rooted to transplant; so may then be cut off from the old Plants, and planted where they are designed to remain; which should be in wilderness Quarters, or other abject Parts of the Garden, where they may have Room to spread, without incommoding other Plants.

RUELLIA.

The Characters are;

It hath a funnel-shaped Flower, consisting of one Leaf, which is cut into several Parts at the Brim, from whose Empalement arises the Pointal, which is fixed like a Nail in the Bottom of the Flower, and afterward becomes a membranaceous Pod, which opens into several Parts, and is filled with small Seeds.

The Species are;

1. RUELLIA *Americana humilis, asphodeli radice.* Plum. Nov. Gen. Dwarf American Ruellia, with an asphodel Root.

2. RUELLIA *Carolinana, foliis oblongis angustis, flore purpureo.* Houst. Carolina Ruellia, with narrow oblong Leaves, and a purple Flower.

3. RUELLIA *Americana humilis, parvo flore caeruleo, capsulis teretibus.* Houst. Dwarf American Ruellia, with a small blue Flower, and a taper Pod.

The first Sort was discovered by Father Plumier in America, who gave this Name to the Genus, in Honour of Dr. Ruellius, who was a very learned Person in Natural History, and lived about two hundred Years past.

The second Sort grows plentifully in South Carolina, from whence it was brought into the English Gardens. This Sort grows much taller than the other two.

The third Sort was discovered by the late Dr. William Houstoun in Jamaica, who sent the Seeds into England. The Flowers of this Kind are much smaller than those of the other Sorts, and are of short Duration, seldom continuing above one Day.

These Plants are propagated by Seeds, which must be sown early in the Spring in Pots filled with light rich Earth, and plunged into a moderate Hot-bed; and when the Plants come up, they must be transplanted each into a separate small Pot, filled with rich Earth, and plunged into a Hot-bed of Tanners-bark, where they must be shaded from the Sun, until they have taken new Root; after which Time they must have fresh Air admitted to them every Day in warm Weather, and be constantly watered three or four times a Week during the summer Season. If the Plants thrive well, those of the first and third Sort will produce Flowers the July following, and will perfect their Seeds in August; but the Roots will continue, provided they are plunged into the Bark-bed in the Stove, and kept in a moderate Temperature of Heat.

The second Sort, which rises much higher

than either of the other, will require to be shifted into larger Pots, by the Beginning of June; and then they should be removed into the Stove, or a Glass-case, where they may have a larger Share of Air; otherwise they will draw up very weak, which will prevent their Flowering. This Sort dies to the Root every Winter; but if the Pots are placed in a warm Stove, their Roots will live and put out again the following Spring, so may be continued several Years. This Sort will ripen Seeds very well, provided the Plants are sheltered when they are in Flower.

The first Sort is by much the most beautiful Plant, the Flowers being four times as large as those of either of the other Sorts, and are of a fine blue Colour; so that it makes a fine Appearance when it flowers; and as the Plants are small, so they may be kept in a little Compass, and are as well worth preserving, as most tender exotic Plants. When this Plant is shifted, (which should be the Beginning of April, before the new Leaves are put out) great Care should be taken, that the Roots are not broken or bruised; for as they consist of many thick Tubers, so if these are injured, the Plant is frequently destroy'd.

RUYSCHIANA.

The Characters are;

It hath a labiated Flower consisting of one Leaf, whose Upper-lip (or Crest) is divided into two Parts; but the Beard is cut into three Segments, the middle Segment being divided into two Parts, and is twisted like a Screw: out of the Empalement arises the Pointal, fixed like a Nail in the binder Part of the Flower, attended by four Embryo's, which afterwards become so many Seeds inclosed in the Empalement.

We have but one Species of this Plant; which is,

RUYSCHIANA *flore caeruleo magno.* Boerb. Ind. alt. Ruyschiana with a large blue Flower.

This Name was given to this Plant by the learned Dr. Boerhaave Professor of Botany at Leyden, in Honour of Dr. Ruysch, who was Professor of Anatomy and Botany at Amsterdam. It was by some Writers in Botany ranged amongst the Hyssops; by others it was made a Ground-pine, and by some a Self-heal; to neither of which it exactly agreed: which occasioned Dr. Boerhaave to constitute a New Genus of it by this Name.

This is a perennial Plant, which dies to the Root in Autumn, and rises again the following Spring: it commonly grows about two Feet high, and has long narrow Leaves, somewhat resembling those of Rosemary; on the Tops of the Stalk the Flowers are produced in a close thick Spike, growing in Whorles round the Stalks, which are of a fine blue Colour, and make a very pretty Appearance during their Continuance in Beauty; which in a cool Season is sometimes six Weeks, beginning in May, and lasting till July.

It is propagated by Seed, which should be sown in the middle of March, in a Bed of fresh light Earth, in an open Exposure; and in about

about five Weeks after, the Plants will appear; when they should be carefully cleared from Weeds; and if the Season should prove dry, they must be refreshed now and then with Water, which will greatly promote their Growth. When the Plants are about two Inches high, they should be carefully transplanted into a Bed or Border of fresh light undunged Earth, observing to shade them from the Sun until they have taken Root, as also to refresh them frequently with Water, until they are well established in this Bed; after which Time they will require no farther Care, but to keep them constantly clear from Weeds till Michaelmas, when they are to be removed into the Places where they are designed to remain for good.

When the Plants are first transplanted from the Seed-bed into the Nursery-bed, they should be planted about six Inches asunder every way, which will be sufficient Room for them the first Season: and this will admit of the Hough to come between the Plants to destroy the Weeds, which is by much a better Method than the pulling out of the Weeds by hand, and is much sooner performed. For as the Hough stirs the Ground between the Plants, it not only cuts down the Weeds, which were up and visible, but also destroys all those whose Seeds were sprouted, and would have soon after appeared; so that one houghing, if well performed, and in dry Weather, will more effectually destroy the Weeds, than two hand Weedings would do, were it performed ever so carefully. Besides, the stirring of the Ground is of great Service to the Plants.

At Michaelmas, when the Plants are transplanted for good, they should be carefully taken up with Balls of Earth to their Roots, and they must be planted in the middle of the Borders, in fresh light Earth, intermixing them with other hardy Plants of the same Growth, where they will make a pretty Appearance, when they are in Flower, and will continue three or four Years; and in some poor stony Soils I have known the Roots live six or seven Years; but these did not produce so large Spikes of Flowers, as those which were younger and more vigorous Plants.

It will be proper to have some of these Plants in Pots, which, in case of a severe Winter, may be sheltered under a Frame, for fear those Plants which are exposed, should be destroyed; and these Plants in Pots, if they are duly supplied with Water in dry Weather, will flower very strong; so may be placed amongst other Plants to decorate Courts, &c. where they will have a good Effect.

But as these Plants do not continue many Years, so it will be proper to raise a Supply of young Plants to succeed them; for the old Plants will produce Seeds plentifully, which are ripe in August, when they should be gathered in dry Weather, and kept in a warm dry Room, till the Time for sowing of them.

SALICARIA, Willow-wort.

To this Article must be added;

1. SALICARIA *byssopi folio latiore*. *Inst.* R. H. Broad hyssop-leaved Willow-wort, or Hedge-hyssop.

2. SALICARIA *byssopi folio angustiore*. *Inst.* R. H. Narrow hyssop-leaved Willow-wort, or Grass-poly.

3. SALICARIA *Lusitanica, angustiore folio*. *Inst.* R. H. Portugal Willow-wort, with a narrow Leaf.

4. SALICARIA *Hispanica, byssopi folio, floribus oblongis, saturate cæruleis*. *Inst.* R. H. Spanish Willow-wort, with a Hyssop-leaf, and oblong deep blue Flowers.

5. SALICARIA *minima Lusitanica, nummulariæ folio*. *Inst.* R. H. The least Portugal Willow-wort, with a money-wort Leaf.

6. SALICARIA *Orientalis, salicis folio acutissimo & glabro*. *Tourn. Cor.* Eastern Willow-wort, with a sharp-pointed smooth willow Leaf.

7. SALICARIA *Cretica, puniceæ folio*. *Tourn. Cor.* Candy Willow-wort, with a pomegranate Leaf.

The two first Sorts are found wild in England, on moist Soils, where the Water stands in Winter; but they are pretty rare near London. These are seldom preserved in Gardens, but are here mentioned to introduce the next Sort, which is a very beautiful Plant, and deserves a Place in every curious Garden, for its long Continuance in Flower. This Sort is a Native of Portugal, but is a tolerable hardy Plant, and will endure the Cold of our ordinary Winters in the open Air; but in very severe Frosts, it is sometimes destroyed; so that some Plants of this Kind may be planted in Pots, which may be sheltered under a common Frame in Winter, where they should have as much free Air as possible in mild Weather; for they only require to be protected from very hard Frosts. In Summer they may be placed abroad with other flowering Plants; but in dry Weather they must be duly watered, otherwise they will not flower strong, nor continue so long in Beauty. These Flowers are produced from the Wings of the Leaves, beginning at the Bottom of the Stalks near the Root, and are continued all the Way up to the Top of the Stalks, which are about two Feet in Length; for this Sort seldom rises any higher: the Flowers are pretty large, and of a bright purple Colour. This Plant begins to flower the Beginning of June, and continues till August.

As this Sort very rarely produces ripe Seeds in England, so it must be propagated by parting of the Roots, or by laying down of the Branches, which will take Root in a few Months

Months (provided they are constantly watered in dry Weather); and may then be taken from the old Plants, and planted into Pots, that they may be sheltered in Winter; and the Spring following, some of them may be shaken out of the Pots, and planted into a Border, where they may have the morning Sun; and in dry Weather, if they are watered constantly, they will flower very well, and make a fine Appearance.

The fourth Sort is also a very beautiful Plant, and well deserves a Place in every good Garden. This grows about the same Height with the former, so may be interspersed with it in the Borders of the Flower-garden; as may also the fifth and seventh Sorts, for Variety, tho' they are not near so beautiful as either of the former Sorts. These may be treated in the same manner as hath been directed for the third Sort; with which Management they will thrive very well.

The sixth Sort grows much taller than either of the other, so should be placed amongst larger Plants. This is very hardy, and may be propagated either by Seeds, or by parting of the Roots, which is the surest way, because the Seeds do not ripen every Year in this Climate. The best Time to part the Roots, is in Autumn, that they may be well fixed in the Ground before the Spring; because those which are parted in the Spring, seldom flower very strong, especially if the Season proves dry. This Sort may be intermixed with the two large Kinds mentioned in the former Volume of the *Gardeners Dictionary*, and will grow in almost any Situation, provided they are watered in dry Weather.

SALICORNIA, Jointed Glasswort, or Saltwort.

The Characters are;

It hath an apetalous Flower, wanting the Em-palement; for the Stamina (or Chives) and the Embryo's grow on the extreme Part of the Leaves. These Embryo's afterwards become Pods or Bladders, which for the most part contain one Seed.

The Species are;

1. **SALICORNIA geniculata sempervirens.** Tourn. Cor. Jointed evergreen Glasswort.

2. **SALICORNIA geniculata annua.** Tourn. Cor. Annual Jointed Glasswort.

These Plants grow on the Sea-coast in many Parts of Europe, and upon the Shores in several Places in England, which are washed every Tide with the Salt-water; but are rarely planted in Gardens, because it is very difficult to make them grow in any other Situation, than in Salt-marshes, and on the Shores, where the Salt-water frequently flows. Of these Plants there seem to be two or three Varieties, which appear remarkably different, but are not supposed to be distinct Species.

The Inhabitants near the Sea-coast, where these Plants grow, cut them up toward the latter End of Summer, when they are fully grown; and after having dried them in the Sun, they burn them for their Ashes, which are used in making of Glass and Soap. These

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Herbs are by the Country People, called *Kelp*; and are promiscuously gathered for Use.

From the Ashes of these Plants is extracted the Salt, called *Sal Kali* or *Alkali*, which is much used by the Chymists.

The manner of gathering and burning of these Herbs is already mentioned under the Article of *Kali*; so I shall not repeat it in this Place.

In some Parts of England, these Herbs are gathered and Pickled for Samphire, tho' it is very different there from.

SAMOLOIDES.

The Characters are;

It hath a Flower consisting of one Leaf, which is cut into four Parts almost to the Bottom, and expands in form of a Star. In the Centre of the Flower arises the Pointal, which is surrounded at Bottom by a Number of slender Threads, which are expanded, and accompanied by four Chives. This Pointal afterward becomes an oblong Seed-vessel, which is bivalve, and contains flat Seeds.

We know but one Species of this Plant; which is,

SAMOLOIDES quæ capraria Curasavica, Cabritta vulgò dicta. H. A. Boerb. Ind. alt. West-Indian Thea, vulgò.

This Plant is very common in Jamaica, and several other Places in the West-Indies, where it hath been by some People dried and used as Thea, from whence it had the Name. In Curasao the Goats feed on this Plant, from whence the Inhabitants gave it the Name of *Cabritta*. But at present it is not used by any of the Inhabitants of America, so far as I can learn.

This Plant is preserved by the Curious in Botany, for Variety-sake; but as there is no great Beauty in its Flowers, so it is seldom preserved in other Gardens. It is propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are about two Inches high, they should be transplanted on another Hot-bed, about four or five Inches asunder, where they should have a large Share of Air in warm Weather, and must be frequently watered. In this Bed the Plants may remain until they have obtained a large Share of Strength, when they should be transplanted into Pots, and plunged into a moderate Hot-bed to promote their taking Root; and after they are well settled in the Pots, they may be placed in the Stove, or in an airy Glass-case, where they may be sheltered from Cold, but they must have a large Share of fresh Air in warm Weather; for if they are exposed abroad, they will not thrive, nor perfect their Seeds. In June these Plants will begin to flower, and in August they will perfect their Seeds, and the Plants will live thro' the Winter, provided they are placed in a warm Stove; but as they produce ripe Seeds the first Year, so it is not worth incumbering the Stove with them in Winter.

SAMOLUS, Round-leav'd Water Pimpernel.

The Characters are;

It hath a wheel-shaped Flower, consisting of one Leaf, which is cut into several Segments;

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the Pointal arises from the Empalement, and is fixed like a Nail in the Centre of the Flower; which uniting with the Empalement, is turned into a Fruit or Pod, opening at the Top, and inclosing many small Seeds.

We have but one Species of this Plant; which is,

SAMOLUS Valerandi. J. B. Round-leaved Water Pimpernel.

This Plant grows wild in swampy Places, where the Water usually stands in Winter; and is seldom preserved in Gardens; it is an annual Plant, which flowers in June, and the Seeds are ripe in August: at which Time, whoever hath a mind to cultivate this Plant, should sow the Seeds on a moist Soil, where the Plants will come up, and require no farther Care, but to keep them clear from Weeds.

SAPINDUS, The Soap-berry.

The Characters are;

It hath a Flower which for the most part is composed of four Leaves, expanding in form of a Rose: from whose four-leaved Empalement arises the Pointal, which afterward becomes a spherical Fruit, inclosing a Nut of the same Form.

We have but one Species of this Plant; which is,

SAPINDUS foliis costæ alatæ imascentibus. Inst. R. H. The Soap-berry or Soap Appletree.

This Tree is very common in Jamaica, Barbados, and most other Places in the West-Indies, where it rises to the Height of thirty Feet or more; but in Europe it is preserved by those Persons who are curious in cultivating exotic Plants, for the singular Structure of the Leaves, which are very long and narrow, having Borders on each Side, which at about every two Inches have *Pinnae* or Wings, opposite to each other, and terminated by an odd one. The Flowers are produced at the Ends of the Branches, which are small and white, growing in Clusters. These are succeeded by spherical brown Berries, about the Size of Cherries, which have very little Pulp, but a brown Skin, covering the Nut, which is round, black and hard. These Nuts were formerly brought into England to make Buttons, for which purpose they were very proper, because they never crack. The Skin which surrounds the Nut, will lather like Soap, and is used in America to wash Linen, tho' many People say it will burn it, when it is often used.

This Plant is propagated by Seeds (which must be obtained from the Countries, where they naturally grow, for they do not produce Fruit in Europe): these must be put into small Pots, filled with fresh rich Earth, and plunged into a Hot-bed of Tanners-bark. These Pots must be frequently watered, otherwise the Berries whose outer Cover is very hard, will not vegetate. In a Month or five Weeks the Plants will begin to appear, when the Glasses of the Hot-bed should be raised every Day in warm Weather, to admit fresh Air to the Plants; but if the Nights are cold, the Glasses should be covered with Mats every Evening, as soon as the Sun is gone off from shining on the Bed; and the Plants must be frequently refreshed

with Water. In three Weeks or a Month after the Plants appear, they will be fit to transplant; when they must be shaken out of the Pots, and carefully parted, so as not to injure their Roots, and each planted into a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun every Day, until they have taken new Root; after which Time they must have free Air admitted to them every Day, when the Weather is warm; and the Plants will require to be frequently watered.

After the Plants are well rooted, they will make great Progress, so as to fill these Pots with their Roots in a few Weeks Time: therefore they must then be shifted into larger Pots; and if the Plants have grown so tall as to reach the Glasses of the Hot-bed, or be in Danger of having their Leaves scorched by the Sun thro' the Glasses, they should be removed into the Stove, and plunged into the Bark-bed; where if they are duly watered in warm Weather, they will make great Progress, and by the Beginning of August, will have Leaves sixteen or eighteen Inches long. The first Leaves of these Plants are very long and narrow, having no *Pinnae* or Wings to them; but as the Plants advance, so they put out first one Wing, then two, and afterwards four; and in old Plants, they have sometimes six or eight Wings, with an odd Wing at the Top.

These Plants are so tender as not to live in the open Air in England, even at the warmest Season of the Year: therefore they should be kept constantly in the Stove plunged into the Bark-bed, where they must be kept very warm in Winter; but in Summer, they must have a large Share of fresh Air in warm Weather, with which these Plants will thrive very fast, and they may be expected to flower, tho' for the singular Form of the Leaves, they deserve a Place in the Stove.

SAPOTA, The Mammee Sapota.

The Characters are;

It hath a rose-shaped Flower, consisting of several Leaves, which are placed in a circular Order; from whose Empalement arises the Pointal, which afterward becomes a large oval soft fleshy Fruit, inclosing an oblong pointed Stone or Fruit, which is finely polished, having a rough Fissure on one of the Edges, of an Ash-colour.

The Species are;

1. *SAPOTA fructu turbinato minori.* Plum. Nov. Gen. Sapota with a lesser Fruit, shaped like a Top.

2. *SAPOTA fructu ovato majori.* Plum. Nov. Gen. Sapota with a larger oval Fruit.

The Name of *Sapota* is what these Fruit are called by the Natives of America; to which some add the Appellation of Mammee. But there is no other Name given to these Fruits by the English, since they have settled in the West-Indies; so far as I can learn.

The first of these Trees is common about Panama, and some other Places in the Spanish West-Indies; but is not to be found in any of the English Settlements in America. The second Sort is very common in Jamaica, Barbados,

bados, and most of the Islands in the *West-Indies*, where the Trees are planted in Gardens for their-Fruit, which is by many Persons greatly esteemed.

These Trees grow in *America* to the Height of thirty five or forty Feet, having a strait Trunk, covered with an ash-colour'd Bark. The Branches are produced on every Side, so as to form a regular Head: these are beset with Leaves, which are a Foot in Length, and near three Inches broad. The Flowers, which are produced from the Branches, are of a cream Colour; when these fall away, they are succeeded by large oval or top-shaped Fruit, which are covered with a brownish Skin, under which is a thick Pulp of a russet Colour, very luscious, called natural Marmelade, from its likeness to Marmelade of Quinces.

As these Trees are Natives of very warm Countries, so they cannot be preserved in *England*, unless they are placed in the warmest Stoves, and managed with great Care. They are propagated by planting of the Stones; but as these will not keep good long out of the Ground, so the surest Method to obtain these Plants, is to have the Stones planted in Tubs of Earth, as soon as they are taken out of the Fruit, and these Tubs placed in a Situation where they may have the morning Sun, and kept duly watered. When the Plants come up, they must be secured from Vermin, and kept clear from Weeds; but should remain in the Country, till they are about a Foot high, when they may be shipped for *England*; but they should be brought over in the summer Season, and, if possible, Time enough for the Plants to make good Roots after they arrive. During their Passage they must have some Water, while they continue in a warm Climate; but as they come into colder Weather, they should have very little Moisture: and they must be secured from Salt-water, which will soon destroy the Plants, if it gets at them.

When these Plants arrive in *England*, they should be carefully taken out of the Tubs, preserving some Earth to their Roots, and planted into Pots filled with fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing, if the Weather is hot, to shade the Glasses with Mats every Day, to screen the Plants from the Sun, until they have taken new Root, observing not to water them too much at first, especially if the Earth in which they come over is moist; because too much Water is very injurious to the Plants, before they are well rooted; but afterward they must have plenty of Water in warm Weather, and they must have a large Share of Air admitted to them; otherwise their Leaves will be infested with Insects, and become foul; in which case they must be washed with a Sponge, to clean them, without which the Plants will not thrive.

In the Winter these Plants must be placed in the warmest Stove, and in cold Weather they should have but little Water given to them, tho' they must be frequently refreshed, when the Earth is dry; especially, if they retain their Leaves all the Winter, they will

require a greater Share of Water, than when they drop their Leaves; so that this must be done with Discretion, according to the State in which the Plants are. As these Plants grow in Magnitude, so they should be shifted into Pots of a larger Size; but they must not be over-potted, for that will infallibly destroy them.

SARRACENA, The Side Saddle-flower.

The Characters are;

It hath a Flower consisting of several Leaves, which are placed circularly, and expand in form of a Rose, and resting in a many-leaved Empalement; from the middle arises the Pointal, which is membranaceous, and shaped like a Hood, and afterwards becomes a roundish Fruit divided into five Cells, which contain oblong Seeds.

We have but one Species of this Plant; which is,

SARRACENA Canadensis, foliis cavis & auritis. Inst. R. H. Canady Sarracena, with hollow eared Leaves.

This strange Plant is a Native of *New England, Virginia*, and several Places in *North America*; where it grows on Bogs, and such Places where the Waters usually stand in Winter. The Leaves of this Plant arise from the Root every Spring, being eight or nine in Number, which are small at the Bottom, but swell larger toward the Top, and are hollow like a Pitcher, having a Sort of an Appendage at the Top, somewhat resembling a Flap, so that in these Leaves there is commonly a large Quantity of Water contained. Between the Leaves arises the Flower-stem, which hath several rosaceous Flowers growing on the Top, which are succeeded by roundish Fruit.

The Name was given to this Plant by Dr. *Tournefort*, in Honour of Dr. *Sarrazin* a curious Botanist, who sent the Plant from *Canady* to Dr. *Tournefort* at *Paris*.

As this Plant grows on Bogs, so it is very difficult to cultivate in *England*; for altho' the Winters are much more severe in the Places of their natural Growth, than they generally are in *England*, yet their Summers being much warmer, they thrive much better, and produce their Flowers and Fruit annually; whereas it is with great Difficulty they are kept alive for a Year or two in *England*; and they have not yet flowered in this Country, that I could ever learn. By the Appearance of some Plants, which I received from *New England*, there seem to be two Sorts of this Plant, one of which is much larger than the other; but as I never had an Opportunity of seeing these Plants in Flower, so I cannot determine any thing with Certainty about them.

The only Method to obtain these Plants is to procure them from the Places of their Growth, and to have them taken up with large Balls of Earth to their Roots, and planted in Tubs of Earth, which must be constantly watered during their Passage, otherwise they will decay before they arrive: and there is little Probability of raising these Plants from Seeds, so that young Plants should be taken up to bring over, which are more likely to stand

stand here, than those which have flowered two or three times. When the Plants are brought over, they should be planted into pretty large Pots, which should be filled with soft spongy Earth, mixed with rotten Wood, Moss and Turf, which is very like the natural Soil in which they grow. These Pots must be constantly supplied with Water, and placed in a shady Situation in Summer; but in the Winter they must be covered with Moss, or sheltered under a Frame, otherwise they will not live in this Country, tho' they have much more severe Frost in the Countries where they naturally grow; but there they are covered with Snow, which may be a great Protection to them. With this Management I have kept some of these Plants alive two Years, but they made very little Progress.

SAURURUS, Lizards-tail.

The Characters are;

It hath an apetalous Flower, consisting of two Chives, which open two ways, and are full of very small Powder (or Farina). The Embryo rests between the two Chives, which afterward becomes an oval soft Fruit, inclosing a single Seed. To these Notes must be added, The Flowers and Fruit are fixed to one Axis, so as to resemble the Tail of a Lizard.

The Species are;

1. SAURURUS racemosus, seu botryites major. Plum. Nov. Gen. Greater branching Lizards-tail.
2. SAURURUS racemosus, seu botryites minor. Plum. Nov. Gen. Lesser branching Lizards-tail.
3. SAURURUS cauda adunca. Plum. Nov. Gen. Lizards-tail, with a crooked Tail.
4. SAURURUS foliis plantagineis, cauda breviori. Plum. Nov. Gen. Lizards-tail, with plantain Leaves, and a shorter Tail.
5. SAURURUS botryites major, foliis plantagineis. Plum. Nov. Gen. Greater clustered Lizards-tail, with plantain Leaves.
6. SAURURUS foliis amplis rotundis & umbilicatis. Plum. Nov. Gen. Lizards-tail, with large round umbilicated Leaves.
7. SAURURUS foliis amplis cordatis, non umbilicatis. Plum. Nov. Gen. Lizards-tail, with large heart-shaped Leaves, not umbilicated.
8. SAURURUS procumbens minor botryites, folio carnosso cordato. Plum. Nov. Gen. Smaller creeping clustered Lizards-tail, with a fleshy heart-shaped Leaf.
9. SAURURUS alius humilis, folio carnosso subrotundo. Plum. Nov. Gen. Low Lizards-tail, with a roundish fleshy Leaf.
10. SAURURUS repens, folio orbiculari, nummulariae facie. Plum. Nov. Gen. Creeping Lizards-tail, with a round Leaf, having the Appearance of Moneywort.
11. SAURURUS repens triphyllus, folio rotundo. Plum. Nov. Gen. Creeping three-leaved Lizards-tail, with a round Leaf.
12. SAURURUS cauliculis maculosis, repens. Plum. Nov. Gen. Creeping Lizards-tail, with a spotted Stalk.
13. SAURURUS frutescens, lauro-cerasi folio, fructu breviori & crassiore. Houst. Shrubby

Lizards-tail, with a laurel Leaf, and a shorter and thicker Fruit.

14. SAURURUS arborescens latifolia villosa, fructu gracili. Houst. Tree-like Lizards-tail, with a broad hairy Leaf, and a slender Fruit.

The seven Sorts first-mentioned grow to be shrubby, and rise to the Height of four or five Feet, having Leaves placed alternately on their Branches. The *Iulus* comes out from the Wings of the Leaves, which is shaped like a Lizard's Tail, from whence they had their Names. By some they are called long Pepper, from the Resemblance their *Iuli* bear to the long Pepper: but the Fruit of these are not used, nor have they the Taste of Pepper. These Sorts were discovered to grow in *Jamaica*, by the late Dr. *Houstoun*; and some of them are described by Sir *Hans Sloane* in his Natural History of *Jamaica*.

The eighth, ninth and tenth Sorts, are Plants of humbler Growth: these trail on the Ground, and emit Roots from their Joints, which fasten themselves into the Earth wherever it is loose, by which Method they spread to a great Distance. The Leaves and Stalks of the ninth Sort are very thick and succulent, and remain always green.

The eleventh and twelfth Sorts are creeping Plants, which fasten themselves to Trees; by which means they rise to the Height of eight or ten Feet, fasten their Roots into the Bark of the Trees, and receive Part of their Nourishment from thence.

All these twelve Sorts were discovered by Father *Plumier* in the *West-Indies*, who has figured and described them in his History of *American Plants*: but seven of them were before described by Sir *Hans Sloane*, in his Natural History of *Jamaica*.

The two last Sorts were discovered by the late Dr. *Houstoun* at *La Vera Cruz*, from whence he sent Samples of them into *England*. These two Sorts grow much larger than either of those before-mentioned.

Some of these Plants are called by the Inhabitants of *Jamaica*, *Spanish Elder*, from their being jointed, and their Branches having a great deal of Pith in them. Others of them, especially those which have Leaves shaped like a Heart, are called *Santa Maria Leaves*.

These Plants most of them grow in moist shady Places, in the warmest Parts of *America*, where many of them root into the decayed Trunks of Trees, and rotten Wood, (especially those which trail) and thereby they propagate faster than by Seeds; for as they emit Roots at almost every Joint, so each of these will make a separate Plant.

But as these Plants are too tender to bear the open Air in this Climate, so they must be preserved in a Stove, where the Air may be kept to a moderate Temperature for Heat; and if they are placed in the Bark-bed, and their Branches permitted to trail on the Surface of the Bark, the Plants will send forth Roots at every Joint, and fasten themselves strongly into the Bark, so will thrive exceeding fast, and produce their Flowers and Fruit.

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The Seeds of these Plants, when brought from abroad, seldom succeed in England; so that the most proper Method to obtain the Plants, is to have some of their Cuttings planted into Boxes of Earth, in the Countries where they naturally grow; and when they are well rooted, they may be sent over to England, with Directions given to the Persons to whose Care they are intrusted, not to let them have too much Water, (especially when they come into a cool Climate) because Moisture then will be very prejudicial to them. They must also be carefully guarded against the Salt-water, which will infallibly destroy them, if it be suffered to come to them. When the Plants arrive in England, they should be carefully taken out of the Boxes, and each planted into a separate small Pot, filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun at first, until they have taken Root; after which Time they should have fresh Air admitted to them, in proportion to the Warmth of the Season: but in Winter they must be kept pretty warm, otherwise they will not live in this Country.

The surest Method to make these Plants thrive in England, is, to plunge the Pots into the Bark-bed in the Stove, and to suffer the Branches of the creeping Kinds to trail on the Surface of the Bed, where they will strike Roots into the Tan, and will thrive exceedingly. These Plants merit a Place in every Collection of Plants, for their remarkable Leaves, and the singular Structure of their Branches, as also for the Odours of their Flowers and Fruit, which are, for the most part, produced from the Wings of the Leaves.

SAXIFRAGA, Saxifrage.

To this Article must be added;

1. SAXIFRAGA *ad folia bulbos gerens*. C.B.P. Saxifrage bearing Bulbs at the Wings of the Leaves.

2. SAXIFRAGA *verna annua humilior*. Inst. R.H. Dwarf spring annual Saxifrage, commonly called Rue-leaved Whitlow-grass.

3. SAXIFRAGA *muscosa, trifido folio*. Inst. R.H. Mossy Saxifrage, with a trifid Leaf, commonly called mountain Sengreen, or Ladies Cushion.

4. SAXIFRAGA *tridactylites Alpina, pallide lutea*. Inst. R.H. Mountain Saxifrage, of a pale yellow Colour, with a Leaf cut into three Segments.

5. SAXIFRAGA *tridactylites Alpina minor & villosa*. Inst. R.H. Smaller hairy Saxifrage of the Alps, with a Leaf cut into three Segments.

6. SAXIFRAGA *alba petræa Ponæ*. Inst. R.H. White Rock Saxifrage.

7. SAXIFRAGA *sedi folio, Pyrenaica serrata*. Inst. R.H. Pyrenean Saxifrage, with a sawed Houseleek-leaf.

8. SAXIFRAGA *foliis subrotundis serratis*. Inst. R.H. Saxifrage with roundish sawed Leaves.

9. SAXIFRAGA *Alpina sedi foliis crenatis asperis*. Inst. R.H. Saxifrage of the Alps, with rough notched Leaves like Houseleek.

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10. SAXIFRAGA *foliis oblongo-rotundis dentatis, floribus compactis*. Raii Syn. Ed. 3. Saxifrage with an oblong roundish indented Leaf, and the Flowers growing in close Bunches.

11. SAXIFRAGA *montana pyramidata, folio longiore*. Inst. R.H. Mountain pyramidal, Saxifrage, with a long Leaf.

12. SAXIFRAGA *Pyrenaica lutea minima, sedi foliis densissime congestis*. Inst. R.H. The least yellow Pyrenean Saxifrage, with houseleek Leaves, growing very close together.

13. SAXIFRAGA *Alpina minima, foliis cæsis, deorsum incurvis*. Inst. R.H. The least Saxifrage of the Alps, with sky-coloured Leaves, which bend downward.

14. SAXIFRAGA *Alpina lutea, sedi folio*. Inst. R.H. Yellow Saxifrage of the Alps, with a Houseleek-leaf.

15. SAXIFRAGA *Pyrenaica tridactylites latifolia*. Inst. R.H. Pyrenean Saxifrage, with broad Leaves, cut into three Segments.

16. SAXIFRAGA *Cantabrica latifolia tridactylites rigidior*. Inst. R.H. Broad stiff leaved Saxifrage of Biscay, with Leaves cut into three Segments.

17. SAXIFRAGA *tridactylites Pyrenaica, pallide lutea, minima*. Inst. R.H. The least pale yellow Saxifrage of the Pyrenees, with Leaves, cut into three Segments.

18. SAXIFRAGA *Pyrenaica, foliis partim integris, partim trifidis*. Inst. R.H. Pyrenean Saxifrage, with Leaves partly intire, and partly cut into three Segments.

19. SAXIFRAGA *Pyrenaica, minima, lutea, musco similis*. Inst. R.H. The least yellow Saxifrage, of the Pyrenean Mountains, resembling Moss.

20. SAXIFRAGA *annua Cretica minima,hederaceo folio*. Fourn. Cor. The least annual Saxifrage of Candia, with an ivy Leaf.

21. SAXIFRAGA *Pensylvanica, floribus muscosis*. Hort. Elth. Saxifrage of Pennsylvania with greenish Flowers, growing Branchy.

The first Sort here mentioned is a Variety of the common white Saxifrage, from which it differs, in bearing small Bulbs at the Leaves. This is not common in England, but is found wild on the Pyrenean Mountains, and in other mountainous Places in Spain and Italy, and propagates very fast by the Bulbs, which grow on the Stalks, in the same manner as the fiery Lily.

The second Sort is a low annual Plant, which usually grows on the Tops of Walls, and on dry rubbishy Places, and flowers in April. This Plant has been esteemed a very good Remedy for the Kings-evil, and other scrophulous Disorders. Mr. Boyle, in his Treatise concerning the Usefulness of Natural Philosophy, has recommended this Herb to be infused in small Beer, and drank for some Days, which he says will cure the Kings-evil, without any sensible Evacuation, by consuming the Humour, mitigating the Pain, dissolving the Tumours, and drying up the Ulcers. The Time for gathering of this Herb to dry, is in the middle of April, when it is in Flower; for it soon after perfects its Seeds, and dies away.

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The third Sort grows wild in several Parts of *Yorkshire*, and other cold Countries. This spreads on the Surface of the Ground, and forms itself into a roundish Tuft, which is exceeding close and soft, and has the Appearance of Moss at a small Distance; from whence some of the Country People give it the Name of Ladies Cushion. This Sort may be propagated in Plenty by its trailing Shoots, which, if they rest on the Ground, will put out Roots and multiply exceedingly. It loves a moist shady Situation.

The fourth, fifth, sixth, twelfth, thirteenth, seventeenth, eighteenth and nineteenth Sorts are also small Plants, which lie close to the Ground, somewhat like the third Sort; so propagate themselves plentifully, and are all of them very hardy Plants being Natives of the *Alps*, *Pyrenees*, and other mountainous Places: They require to be planted in a moist Soil, and a shady Situation; for if they are too much exposed to the Sun, they will not thrive; nor will they continue long, if they are planted in a rich Soil.

As these Plants do not produce very beautiful Flowers, so they are seldom regarded, and are rarely planted in Gardens, unless by some Persons who are curious in Botany, for the sake of Variety. But yet these Plants may be introduced to plant about Rock-work, or between the Joints of Rustick-buildings, where, if they are in the Shade, they will thrive very well, and have a very good Effect to the Sight: for these will succeed, where Moss cannot be planted; and having so much the Appearance of Moss, will be by most People taken for it at a small Distance; and as these continue green throughout the Year, so they will much better answer the Purpose.

The seventh, eighth, ninth, tenth, eleventh and fourteenth Sorts, have broader Leaves, and appear very much like some Sorts of Houseleeks. These are very hardy Plants, being Natives of Northern Countries; so must be planted in a shady Situation, and a poor Soil; but they will grow on drier Places than the former Sorts. These Plants are easily propagated by Off-sets, which they send out in great Plenty, and may be adapted to the same Purposes as the former, to adorn Rock-work, &c. and will make a pretty Diversity.

The twentieth Sort is an annual Plant, which was found by Dr. *Tournefort*, in the Island of *Crete*, and is by some preserved for the sake of Variety; but there is no great Beauty in it.

The twenty-first Sort was brought from *Pennsylvania* to Mr. *Peter Collinson*, who hath distributed it to several Persons who are curious in preserving rare Plants. This Sort hath long Leaves, which spread on the Surface of the Ground, from between which arise the Flower-stems, which grow about two Feet high, and branch toward the Top, bearing Clusters of small greenish Flowers. This is propagated by parting of the Roots, and should be planted in a shady Situation, where if it is duly watered in dry Weather, it will thrive and flower every Year plentifully, and

may be allowed a Place in shady Borders for the sake of Variety.

SCABIOSA, Scabious.

To this Article must be added;

1. SCABIOSA *fruticans latifolia alba*. C. B. P. White broad-leaved shrubby Scabious.

2. SCABIOSA *fruticans latifolia, floribus ad caeruleum inclinantibus*. C. B. P. Broad-leaved shrubby Scabious, with Flowers inclining to Blue.

3. SCABIOSA *frutescens angustifolia alba*. C. B. P. White narrow-leaved shrubby Scabious.

4. SCABIOSA *multifido folio, flore flavescente*. C. B. P. Scabious with a variously divided Leaf, and a yellowish Flower.

5. SCABIOSA *montana glabra, foliis scabiosæ vulgaris*. C. B. P. Mountain smooth-leaved Scabious.

6. SCABIOSA *montana latifolia non laciniata, rubra & prima*. C. B. P. The first red broad-leaved mountain Scabious, not jagged.

7. SCABIOSA *latifolia rubra non laciniata secunda*. C. B. P. The second red broad-leav'd, Scabious, not jagged.

8. SCABIOSA *argentea angustifolia*. C. B. P. Narrow silver-leaved Scabious.

9. SCABIOSA *Sicula fruticans, laureolæ folio, subtus incano*. Inst. R. H. Shrubby Sicilian Scabious, with a spurge laurel Leaf, hoary underneath.

10. SCABIOSA *frutescens, foliis leucii bortenensis*. Hort. Catb. Shrubby Scabious, with stock-gilly-flower Leaves.

11. SCABIOSA *Cretica frutescens, auriculæ urfi folio*. Tourn. Cor. Shrubby Candy Scabious, with a bear's-ear Leaf.

12. SCABIOSA *frutescens, foliis infra integris, flore caeruleo*. Boerb. Ind. Shrubby Scabious, with the lower Leaves intire, and a blue Flower.

13. SCABIOSA *perennis Sicula, flore sulphureo*. Boerb. Ind. Perennial Sicilian Scabious, with a brimstone-coloured Flower.

14. SCABIOSA *stellata frutescens, leucii folio minor, unâ alterâve crenâ inciso*. Flor. Bat. Shrubby starry seeded Scabious, with a smaller stock-gilly-flower Leaf.

15. SCABIOSA *Africana frutescens maxima, foliis rugosis & crenatis minor*. Par. Bat. Greatest shrubby African Scabious, with rough and less notched Leaves.

16. SCABIOSA *Africana frutescens maxima, foliis tenuissimè incisis*. Boerb. Ind. alt. Greatest shrubby African Scabious, with Leaves very finely jagged.

17. SCABIOSA *altissima annua, foliis agrimonie nonnihil similibus*. H. L. The tallest annual Scabious, with Leaves, something like those of Agrimony.

18. SCABIOSA *fraxinellæ foliis*. Inst. R. H. Scabious with white dittany Leaves.

19. SCABIOSA *virgæ pastoris folio*. C. B. P. Scabious with a lesser teasel Leaf.

20. SCABIOSA *Lusitanica, Indicæ similis*. Inst. R. H. Portugal Scabious like the Indian one.

21. SCABIOSA *stellata Hispanica, amplissimo folio*. Inst. R. H. Spanish starred Scabious, with a very large Leaf.

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22. *SCABIOSA stellata annua prolifera*. H. R.
Par. Annual proliforous starred Scabious.

23. *SCABIOSA Orientalis stellata, foliis variis, flore carneo, semiflosculis florum fimbriatis*.
Eastern starred Scabious, with variable Leaves, and a flesh-coloured Flower, whose Half-florets are fringed.

The first, second, third, fourth, fifth, sixth, seventh, eighth, twelfth, thirteenth, eighteenth and nineteenth Sorts, are all of them abiding Plants, which are hardy enough to live in the open Air in *England*: so may be managed as hath been directed for the common Sorts of Scabious, in the former Volume of the *Gardeners Dictionary*.

The ninth, tenth, eleventh and fourteenth Sorts, are also abiding Plants; but are somewhat tenderer than those before-mentioned: so some Plants of each Kind should be kept in Pots, that they may be sheltered in Winter under a common Hot-bed Frame; and the others must be planted in warm Borders, otherwise they will not live thro' the Winters in this Country: and if the Soil in which these are planted, is poor and dry, they will grow stunted, and bear the Cold much better, than those which are planted in a rich Soil, and grow freely. Those Plants which are in Pots, and are placed in Shelter in Winter, must have as much free Air as possible in mild Weather; otherwise they will draw up weak, and appear very unsightly; so they should only be covered in very hard Frosts, and continually exposed in mild Weather.

The fifteenth and sixteenth Sorts were brought from the *Cape of Good Hope*, so are more tender than the former: therefore these must always be kept in Pots, and in Winter should be placed in an airy Glass-case, where in mild Weather they may have as much free Air as possible; they should be frequently watered, for they are very thirsty Plants. In severe Frost they must be carefully guarded, but they will bear a little Cold pretty well.

All the shrubby Sorts of Scabious may be propagated by Cuttings, which may be taken off during any of the summer Months, and should be planted in a shady Border, and duly watered in dry Weather, which will promote their taking Root; and then they may be potted, and placed in a shady Situation, till they have taken new Root, after which Time they may be placed amongst other hardy exotic Plants, in a sheltered Situation, where they may remain until the End of *October*, when they must be removed into Shelter. In some favourable Seasons these Plants will produce good Seeds in *England*, so that the Plants may be raised from these, by sowing them in an open Border of light Earth about the middle of *March*; and if the Spring should prove very dry, it will be necessary to water the Ground now and then, which will forward the Vegetation of the Seed; so that the Plants will appear in about three Weeks after the Seeds are sown. When they come up, they must be kept clear from Weeds, and in dry Weather duly watered; and when they are strong enough to transplant, they should be planted

in Pots, and managed in the same Manner as those Plants which are propagated by Cuttings.

The seventeenth, twentieth, twenty-first, twenty-second and twenty-third Sorts, are annual Plants, which are only propagated by Seeds. These may be managed in the same manner as hath been directed for the *Indian Scabious's*, in the former Volume of the *Gardeners Dictionary*.

All the Sorts of Scabious continue a long Time in Flower, for which they are regarded; for there is no very great Beauty in their Flowers: but as most of the hardy Sorts produce Flowers near three Months successively, so they may be allowed a Place in the Borders of large Gardens, because they require very little Care to cultivate them. And as the shrubby Kinds continue in Flower most Part of the Year, so they make an agreeable Variety amongst hardy exotic Plants in Winter.

SCANDIX, Shepherds Needle or Venus-comb.

The Characters are;

It hath a rose-shaped umbellated Flower, consisting of several Petals, which are ranged orbicularly, and rest on the Empalement; which becomes a Fruit consisting of two Parts, having two Seeds, which resemble a Needle, when joined.

The Species are;

1. *SCANDIX femine rostrato vulgaris*. C. B. P. Common Shepherds Needle, with beaked Seeds.

2. *SCANDIX Cretica major*. C. B. P. Great Shepherds Needle of Crete.

3. *SCANDIX Cretica minor*. C. B. P. Smaller Shepherds Needle of Crete.

4. *SCANDIX Orientalis, flore maximo*. Tourn. C. r. Eastern Shepherds Needle, with a very large Flower.

The first of these Plants grows wild amongst Corn, in most Parts of *England*. The second and third Sorts grow wild in the Island of *Candia*, and the fourth Sort was discovered by Dr. *Tournefort* in the *Levant*.

These Plants are preserved by the Curious in Botany, for the Sake of Variety; but are seldom admitted into other Gardens. The Fruit of these Plants, having Beaks, greatly resemble Cranes Bills at a small Distance; but being ranged somewhat like the Teeth of a Comb, occasioned the Name given to it.

They may be propagated by Seeds, which should be sown in Autumn, soon after they are ripe, in the Place where they are designed to remain, which should be in a shady Situation; and when the Plants are come up, they will require no farther Care, but to keep them clear from Weeds. In *June* the Plants will flower, and in the Beginning of *August* they will perfect their Seeds, and soon after decay. But if their Seeds are permitted to scatter, the Plants will come up without any manner of Care, and become Weeds in the Garden.

SCOLYMUS, The Golden Thistle.

The Characters are;

The whole Plant hath the Appearance of a Thistle: the Flower consists of many Half-florets, which

which rest on the Embryo's; each of these are separated by a thin Leaf, and on the Top of each Embryo is fastened a little Leaf. These are contained in a scaly Empalement, which incloses the Seed.

The Species are;

1. *SCOLYMUS chrysanthemus*. C. B. P. The golden Thistle.
2. *SCOLYMUS Chrysanthemus annuus*. A. R. Par. Annual Golden Thistle.
3. *SCOLYMUS Chrysanthemus Africanus procerior*. H. R. Par. Taller African golden Thistle.

The first and second Sorts grow wild in the South of France and in Spain; but the third Sort is a Native of Africa. The first and third Sorts are biennial Plants; but the second is an annual, so they perish soon after they have perfected their Seeds.

They are propagated by Seeds, which should be sown in March, on a Bed of fresh undunged Earth, in an open Situation; and when the Plants are come up, they should be kept clear from Weeds; and where they grow too close, some of them should be pulled out, so as to leave those which are designed to remain, about two Feet asunder. This is all the Culture which these Plants require; for as they send forth tap Roots, so they do not bear transplanting well: therefore they must be sown where they are to remain, and if they are kept clear from great Weeds, they will thrive very well; and when the Seasons prove dry, will perfect their Seeds in Autumn; but in wet Seasons they rarely ever produce good Seeds in England, which renders it difficult to continue the Species, without procuring fresh Seeds from abroad.

These Plants are preserved by those Persons who are curious in Botany, for Variety sake, but are rarely planted in other Gardens.

SCORPIOIDES, Catterpillar.

To this Article must be added;

1. *SCORPIOIDES filiqua cochleata & striata Olyssiponensis*. H. R. Par. Catterpillar with a cochleated and furrowed Pod.
2. *SCORPIOIDES foliis viciae, minima*. Mor. Hist. The least Catterpillar, with vetch Leaves.

These are both annual Plants, which are propagated by Seeds in the same manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for the Sorts there enumerated.

SCROPHULARIA, Figwort.

The Species omitted in the former Volume are;

1. *SCROPHULARIA flore luteo*. C. B. P. Figwort with a yellow Flower.
2. *SCROPHULARIA folio urticae*. C. B. P. Figwort with a nettle Leaf.
3. *SCROPHULARIA betonica folio*. Inst. R. H. Figwort with a betony Leaf.
4. *SCROPHULARIA scorodoniae folio*. Mor. Hist. Figwort with a wood-sage Leaf.
5. *SCROPHULARIA peregrina frutescens, foliis teucrii crassusculis*. Breyn. Cent. Foreign

shrubby Figwort, with thick germander Leaves.

6. *SCROPHULARIA minor*, *Ruta canina dicta*. Moriss. Hist. Lesser Figwort, called Dogs-rue.

7. *SCROPHULARIA Lusitanica frutescens, verbenacae foliis*. Inst. R. H. Shrubby Portugal Figwort, with vervain Leaves.

8. *SCROPHULARIA Cretica frutescens, folio vario crassiori*. Tourn. Cor. Shrubby Figwort of Candia, with a thicker variable Leaf.

9. *SCROPHULARIA Græca frutescens & perennis, urticae folio*. Tourn. Cor. Greek shrubby and perennial Figwort, with a nettle Leaf.

10. *SCROPHULARIA Ephebia, lunariae folio, flore rubro*. Tourn. Cor. Ephebian Figwort, with a moonwort Leaf, and a red Flower.

11. *SCROPHULARIA Orientalis, foliis cannabinis*. Tourn. Cor. Eastern Figwort, with bastard hemp Leaves.

12. *SCROPHULARIA Orientalis, amplissimo folio, caule alato*. Tourn. Cor. Eastern Figwort, with a large Leaf, and a winged Stalk.

13. *SCROPHULARIA Orientalis, tiliae folio*. Tourn. Cor. Eastern Figwort, with a lime-tree Leaf.

14. *SCROPHULARIA Orientalis, chrysanthemi folio, flore minimo variegato*. Tourn. Cor. Eastern Figwort, with a corn-marygold Leaf, and the least variegated Flower.

The first, second, third, sixth, tenth and fourteenth Sorts, are biennial Plants, which very rarely live longer than two Years. These seldom flower the same Season their Seeds are sown; or if they do, it is generally pretty late in the Autumn, so that they do not produce good Seeds: but when the Plants grow short, and do not put out their Flower-stems the first Year; they flower very strong early in the following Summer, and produce good Seeds. These Sorts are hardy enough to endure the Cold of our ordinary Winters very well, provided they are planted in a dry undunged Soil.

The fourth, fifth, seventh, eighth, ninth, eleventh, twelfth and thirteenth Sorts, are abiding Plants, their Roots continuing many Years; and the eleventh Sort creeps at the Root, so that it propagates very fast that way, as also by Seeds, this is an extreme hardy Plant, and will live in almost any Soil and Situation; but should not be planted too near other Plants; because it creeps so far, as to interfere with such Plants as grow near it.

The other Sorts will endure the Cold of our ordinary Winters very well, if they are planted in a sheltered Situation; and when they are planted in a lean rubbishy Soil, they will not grow too freely, so will be stunted, and will endure a much greater Share of Cold, than when they are planted in a rich Soil, where they become very luxuriant.

All these Sorts may be propagated by Seeds, which may be sown, and the Plants managed in the same manner as hath been directed in the former Volume of the *Gardeners Dictionary*, for those Sorts which are there enumerated; and being intermixed with other hardy Plants in a large Garden, will make an agreeable Variety.

SEDUM,

SEDUM, Houseleek.

To this Article must be added ;

1. *SEDUM majus montanum, dentatis foliis, alterum.* C. B. P. Another great mountain Houseleek, with indented Leaves.

2. *SEDUM majus montanum, foliis non dentatis, floribus rubentibus.* C. B. P. The great mountain Houseleek, with indented Leaves, and reddish Flowers.

3. *SEDUM teretifolium majus, flore albo.* Mor. Hort. R. Blasf. Greater Houseleek with taper Leaves, and a white Flower.

4. *SEDUM minus, lato & crasso caule, Portlandicum Belgarum.* H. R. Par. Small Portland Houseleek, with a broad and thick Stalk.

5. *SEDUM Alpinum roseum, acuto folio, hæmatodes majus.* H. R. Par. Greater bloody rose Houseleek of the Alps, with a sharp-pointed Leaf.

6. *SEDUM Alpinum roseum medium, aculeo rubente.* H. R. Par. Middle rose Houseleek of the Alps, with reddish Prickles.

7. *SEDUM Alpinum roseum minus, viride & subsursutum.* H. R. Par. Small rose, green and hairy Houseleek of the Alps.

8. *SEDUM Alpinum subbirsutum, folio longiore.* H. R. Par. Hairy Houseleek of the Alps, with a longer Leaf.

9. *SEDUM Alpinum subbirsutum, corona floris purpurascens, disco viridi.* H. R. Par. Hairy Houseleek of the Alps, with the Borders of a purplish Colour, and the middle Green.

10. *SEDUM minus teretifolium luteum.* C. B. P. Small taper-leaved yellow Houseleek.

11. *SEDUM minus teretifolium alterum.* C. B. P. Another small taper-leaved Houseleek.

12. *SEDUM longifolium, citrino flore.* Mor. H. R. Blasf. Long-leaved Houseleek, with a citron-coloured Flower.

13. *SEDUM minimum luteum, non acre.* J. B. The smallest yellow Houseleek, which is not acrid.

14. *SEDUM minimum non acre, flore albo.* Raii Hist. The least Houseleek, which is not acrid, with a white Flower.

15. *SEDUM Alpinum, flore pallido.* C. B. P. Alpine Houseleek, with a pale Flower.

16. *SEDUM Alpinum, rubro magno flore.* C. B. P. Alpine Houseleek, with a large red Flower.

17. *SEDUM Hispanum, folio glauco acuto, flore albido.* Boerb. Ind. alt. Spanish Houseleek, with a pointed sea-green Leaf, and a whitish Flower.

18. *SEDUM palustre subbirsutum purpureum.* C. B. P. Hairy purple marsh Houseleek.

19. *SEDUM ebinatum, vel stellatum, flore albo.* J. B. Starry Houseleek, with a white Flower.

20. *SEDUM ebinatum, flore luteo.* J. B. Prickly Houseleek, with a yellow Flower.

All these Sorts of Houseleek are very hardy Plants, which will thrive in the open Air in England, and may be easily propagated by Off-sets or Branches, which will readily take Root. Those Kinds which trail on the Ground (as many of these do) will push out Roots from their Branches, and thereby spread themselves to a great Distance. But the se-

venteenth, nineteenth and twentieth Sorts, are annual Plants, which are only propagated by Seeds ; but if their Seeds are permitted to scatter on the Ground, the Plants will come up in Autumn, and require no other Care, but to clear them from great Weeds, which, if permitted to grow amongst them, would overbear and destroy the Plants.

These Plants are preserved in the Gardens of some Persons, who are curious in Botany ; but are very rarely admitted into other Gardens ; tho' they may be very ornamental, when rightly disposed. For there are no Plants so proper to plant on the Walls of Ruins, or other rustic Buildings, where they will thrive without any Trouble, and endure the greatest Drought, and are never injured by Frosts. And as there is a great Variety of Species, which differ greatly from each other, not only in their Flowers, but also in the whole Face of the Plants ; so they will afford an agreeable Variety, if they are properly disposed. In planting of these Plants, there is no other Care required, but to lay a little moist Earth on the Joints of the Walls or Buildings, where they are designed to grow, and therein to plant some of the Plants in small Bunches, which will soon take Root, and in one Year's Time will spread to a considerable Distance. The best Season for this Work is a little before Michaelmas, that the Plants may be rooted, before the hard Frost comes on. The annual Kinds will also grow in the same manner, and will shed their Seeds, and maintain themselves without any Trouble, when they are once fixed in the Place. These Sorts will most of them grow from the Joints of Walls, which are perpendicular, where scarce any other Plants will live ; which renders them more valuable, especially as they are so easily propagated.

The third, tenth and eleventh Sorts, produce long Branches, which hang down from the Walls where they grow ; therefore should be disposed near the Edges of Buildings, or on the Tops of rustic Houses, and near the Sides, where they will trail, and make a pretty Appearance.

The thirteenth, fourteenth and seventeenth Sorts, have the Appearance of the Stone-crop ; these have short Branches, and small Leaves, producing their Flowers on the Tops of the Shoots, which are seldom above three or four Inches high, but spread and form into close large Bunches ; and where they scatter their Seeds, if there is but a small Share of Earth, the Plants will come up, and multiply so fast, as to cover the Top of a House in a few Years.

The first, second, fourth, fifth, sixth, seventh, eighth, ninth, twelfth, fifteenth, sixteenth and eighteenth Sorts, grow in close Heads, somewhat like the common Houseleek, and are propagated by Off-sets in the same manner : these may be disposed on the Tops of Walls and Buildings, intermixed with the common Sorts of Houseleek, where they will make a pretty Diversity, being very different in their Appearance, and producing a great Variety in their Flowers.

SEEDS.

In the former Volume of the *Gardeners Dictionary*, I have set down the general Definition of a Seed, and an Explanation of the Manner how Seeds vegetate; as also a Method how to raise such exotic Seeds as have hard Covers, which will not vegetate in the same easy Manner, as most other Sorts do; and in this Place it may not be amiss to add a Table of the several Sorts of Seeds which are usually sown in the *English* Gardens, and to distinguish the Sorts which will keep good but a short Time out of the Ground, from those which, if well saved, and carefully preserved, will grow, if kept some Years before they are sown.

The first Class of Seeds which I shall enumerate, is of those which should be sown in the Autumn, soon after they are ripe; otherwise many of them will not succeed, and others of them will often remain in the Ground a whole Season, if they are kept out of the Ground till Spring, so that a full Year is thereby lost:

Adonis or Flos Adonis, *see* Adonis.
 Alexanders or Alissanders, *see* Smyrnium.
 Anemomy or Windflower, *see* Anemone.
 Angelica.
 Arsmart the Eastern Sort, *see* Persicaria.
 Ash-keys, *see* Fraxinus.
 Asphodel or Kingspear, *see* Asphodelus.
 Auricula.
 Beech-mast, *see* Fagus.
 Bishopsweed, *see* Ammi.
 Christopher-herb, *see* Christophoriana.
 Ciceli, *see* Myrrhis.
 Colchicum or Bastard-saffron.
 Cornfallet, *see* Valerianella.
 Cornflag *see* Gladiolus.
 Crocus.
 Crown Imperial, *see* Corona Imperialis.
 Fennel-grant, *see* Ferula.
 Flower-de-luce, *see* Iris.
 Fraxinella.
 Fritillaria or Chequered Tulip.
 Gentian, *see* Gentiana.
 Ground-pine, *see* Chamæpytis.
 Hares-ear, *see* Bupleurum.
 Hart-wort, *see* Bupleurum and Sefeli.
 Hogs-fennel, *see* Peucedanum.
 Hornbeam, *see* Carpinus.
 Hyacinth, *see* Hyacinthus.
 Juniper, *see* Juniperus.
 Laserwort, *see* Laserpitium.
 Lily, *see* Lilium.
 Lily, Asphodel, *see* Lilio-Asphodelus.
 Lily Hyacinth, *see* Lilio-Hyacinthus.
 Lily Narcissus, *see* Lilio-Narcissus.
 Lovage, *see* Ligusticum.
 Mandrake, *see* Mandragora.
 Maple tree, *see* Acer.
 Masterwort, *see* Imperatoria and Astrantia.
 Mercury, *see* Mercurialis.
 Moly.
 Muscari.
 Narcissus or Daffodil.
 Oak, *see* Quercus.
 Oak of Jerusalem, *see* Chenopodium.

Pasque-flower, *see* Pulsatilla.
 Piony, *see* Pæonia.
 Polyanthus, *see* Primula Veris.
 Ranunculus or Crowfoot.
 Samphire, *see* Crithmum.
 Scurvy-grass, *see* Cochlearia.
 Sefeli or Sermountain, *see* Siler.
 Snow-drop, *see* Narcisso-leucoium.
 Sowbread, *see* Cyclamen.
 Spiderwort, *see* Phalangium.
 Spignel, *see* Meum.
 Star of Bethlehem, *see* Ornithogalum.
 Staves-acre, *see* Delphinium.
 Tulip, *see* Tulipa.
 Turnsole, *see* Heliotropium.
 Yew-tree, *see* Taxus.

In the next Class I shall enumerate those Sorts of Seeds, which are best the first Spring after they are sowed, many of which will not grow, if they are kept longer; so that whoever deals in Seeds, should destroy the Seeds they have remaining after the Season is over, and not sell them to impose on their Dealers to the great Loss of their Crops, nor keep them to mix with new Seeds, as is too often practised.

African Marygold, *see* Tagetes.
 Agrimony, *see* Agrimonia.
 Alkanet, *see* Anchusa.
 Amaranthoides or Globe-Amaranthus.
 Anise, *see* Anisum.
 Asparagus or Spearage.
 Balsamine, *see* Balsamina.
 Basil, *see* Ocymum.
 Bastard-saffron, *see* Carthamus.
 Bay-tree, *see* Laurus.
 Bean, *see* Faba.
 Beet, *see* Beta.
 Blue-bottle, *see* Cyanus.
 Borrage, *see* Borago.
 Buckwheat, *see* Fagopyrum.
 Bugloss, *see* Buglossum.
 Canterbury-bell, *see* Campanula.
 Caraway, *see* Carum.
 Carnation, *see* Caryophyllus.
 Carrot, *see* Daucus.
 Catterpillar, *see* Scorpioides.
 Celery, *see* Apium.
 Chervil, *see* Chærophyllum.
 Chestnut, *see* Castanea.
 Chickling-pea, *see* Cicer.
 Clary, *see* Horminum.
 Columbine, *see* Aquilegia.
 Coriander, *see* Coriandrum.
 Cranesbill, *see* Geranium.
 Cress, *see* Nasturtium.
 Cummin, *see* Cuminum.
 Cypress, *see* Cupressus.
 Dames-violet, *see* Hesperis.
 Everlasting-pea, *see* Lathyrus.
 Fennel, *see* Foeniculum.
 Fennel-flower, *see* Nigella.
 Fenugreek, *see* Fœnum Græcum.
 Finochia, *see* Foeniculum.
 Firr, *see* Abies.
 French-honeysuckle, *see* Hedysarum.

S E

French-marygold, *see* Tagetes.
 Goats-rue, *see* Galega.
 Globe-thistle, *see* Echinopus.
 Gromwel or Gray-mil, *see* Lithospermum.
 Henbane, *see* Hyoscyamus.
 Hemp, *see* Cannabis.
 Hollyhock, *see* Malva-rosea.
 Hyssop, *see* Hyssopus.
 Indian-pepper, *see* Capsicum.
 Kidney-bean, *see* Phaseolus.
 Larch-tree, *see* Larix.
 Larkspur, *see* Delphinium.
 Lavender, *see* Lavendula.
 Laurel, *see* Laurocerasus.
 Leek, *see* Porrum.
 Lentil, *see* Lens.
 Love-apple, *see* Lycopersicon.
 Lupine, *see* Lupinus.
 Lychnis or Catchfly.
 Mad-apple, *see* Melongena.
 Mallow the Venetian, *see* Ketmia.
 Marjoram, *see* Majorana.
 Marvel of Peru, *see* Jalapa.
 Marygold, *see* Caltha.
 Millet, *see* Milium.
 Mullein, *see* Verbascum.
 Moth-mullein, *see* Blattaria.
 Navew, *see* Napus.
 Oil-nut or Palma Christi, *see* Ricinus.
 Roman-nettle, *see* Urtica.
 Onion, *see* Cepa.
 Orach, *see* Atriplex.
 Origany, *see* Origanum.
 Panic, *see* Panicum.
 Parsley, *see* Apium.
 Parsnip, *see* Pastinaca.
 Pease, *see* Pisum.
 Pine, *see* Pinus.
 Pink, *see* Caryophyllus.
 Poppy, *see* Papaver.
 Purslain, *see* Portulaca.
 Radish, *see* Raphanus.
 Rape, *see* Napus.
 Rue, *see* Ruta.
 Savory, *see* Satureia.
 Scabious, *see* Scabiosa.
 Skirret, *see* Sisarum.
 Snails, *see* Medica.
 Snapdragon, *see* Antirrhinum.
 Spinach, *see* Spinachia.
 Stock Gilly-flower, *see* Leucoium.
 Succory, *see* Cichorium.
 Sun-flower, *see* Corona-solis.
 Thyme, *see* Thymus.
 Tobacco, *see* Nicotiana.
 Trefoil, *see* Trifolium.
 Turnep, *see* Rapa.
 Venus Looking-glass, *see* Campanula.
 Venus Navelwort, *see* Omphalodes.
 Vetch, *see* Vicia.
 Woad, *see* Iffatis.
 Wallflower, *see* Leucoium.

The next Class of Seeds are such as may be kept two Years, and will not be the worse, provided they are well sowed. Tho' these are equally good for Use the first Year:

Amaranthus or Flower-gentle.

S E

Citrul or Water-melon, *see* Anguria.
 Cabbage, *see* Brassica.
 Clover, *see* Trifolium.
 Colliflower, *see* Brassica.
 Convolvulus or Bindweed.
 Endive, *see* Endivia.
 Flax, *see* Linum.
 Indian Flowering-reed, *see* Cannacorus.
 La-lucern, *see* Medica.
 Lavender, *see* Lavendula.
 Lettuce, *see* Lactuca.
 Melilot, *see* Melilotus.
 Mustard, *see* Sinapi.
 Sorrel, *see* Acetosa.

The third Class of Seeds are such as may be kept three Years or more, and will grow very well afterward, provided they are well sowed; and some of the Sorts are generally preferred for being three Years old, particularly the Cucumber and Melon Seeds; because when the Seeds are new, the Plants grow too vigorous, and produce a small Quantity of Fruit: but it is not proper to keep these longer than three Years, notwithstanding they will grow at eight or nine Years old; because when the Seeds are old, the Plants will be weak, and the Fruit which they produce will be small:

Amaranthus or Flower-gentle.
 Cabbage, *see* Brassica.
 Cedar of Libanus, *see* Cedrus, if kept in the Cones.
 Cucumber, *see* Cucumis.
 Gourd, *see* Cucurbita.
 Lettuce, *see* Lactuca.
 Melon, *see* Melo.
 Pumpio, *see* Pepo.
 Savoy, *see* Brassica.
 Simnel or Squash, *see* Melopepo.
 Water Melon, *see* Anguria.

The following is a List of such Seeds, as do frequently remain in the Earth a whole Year, especially if they are sown in the Spring of the Year; so that whenever the Plants do not come up the first Year, the Ground should remain undisturbed till the following Spring, (but must be kept clear from Weeds) when the Plants will come up:

Adonis or Flos Adonis.
 Alaternus.
 Alexanders, *see* Smyrnum.
 Angelica, *see* Valerianella.
 Corn-fallet Fennel, *see* Foeniculum.
 Fraxinella or white Dittany.
 Grom-well or Gray-mill, *see* Lithospermum.
 Harefear, *see* Bupleurum.
 Hartwort, *see* Bupleurum.
 Hawthorn, *see* Mespilus.
 Hogs-fennel, *see* Peucedanum.
 Holly, *see* Aquifolium.
 Juniper, *see* Juniperus.
 Laserwort, *see* Laserpitium.
 Lovage, *see* Ligusticum.
 Maple, *see* Acer.
 Masterwort, *see* Astrantia.

Mer-

Mercury, *see* Mercurialis.

Moly.

Piony, *see* Pœonia.

Seseli or Sermountain, *see* Siler.

Spignel, *see* Meum.

Staves-acre, *see* Delphinium.

Turnsole, *see* Heliotropium.

Yew, *see* Taxus.

If the Seeds mentioned in this List are sown soon after they are ripe, many of the Sorts will come up the following Spring; but whenever they fail so to do, there will be no Danger of their growing the following Year, provided the Seeds were good; therefore People should not despair of them the first Year. Most of the *Umbelliferous* Plants have this Property of remaining in the Ground several Months, and sometimes a whole Year, before the Plants appear; therefore they should be managed accordingly, by sowing their Seeds on a Border, which can be suffered to remain undisturbed till the Plants come up. There are some particular Sorts of Seeds, which I have known remain in the Ground eighteen Months, and sometimes two Years; after which Time the Plants have come up very well; of these Sorts are the *Morina*, *Tribulus terrestris*, *Staves-acre*, *Mercury*, and some others; but as they do not constantly remain so long in the Ground, so there can be no Certainty of the Time when the Plants will appear.

The Rules here laid down, concerning the Length of Time which Seeds may be kept out of the Ground, and prove good, will in general be found true, being drawn up from several Years Experience, having taken Notes every Year from the Times of sowing great Varieties of Seeds, to the Appearance of the Plants above Ground. And in this, I have observed such Oddness in the Growth of Seeds, as is not to be accounted for; as that of sowing Seeds of the same Plant for two or three Years successively, and not having had one Plant arise; and the fourth Year from the remaining Part of the Seeds, I have had some Plants come up, notwithstanding the Age of the Seeds. At other times it has happened, that some Seeds have grown the same Spring they were sown, and a great Part of them have remained in the Ground till the following Autumn, when the Plants have come up; so that there have been two different Crops, from the same sowing.

I have also tried many Experiments in keeping of Seeds, and find the best Method to preserve them good, is to keep them in a moderate Temperature of Warmth, where they may not suffer from any Inclemencies in the outward Air, nor have too much Warmth, which will exhale the Moisture too freely, and cause the Seeds to decay sooner than they otherwise would do. This is well known to most People who cultivate *Melons*; who, when their Seeds are new, which would occasion the Plants being too vigorous, and therefore not so fruitful, put them into the inner Pocket of their Breeches, which

are in constant Wear, where they keep them for six Weeks or two Months before they sow them; which will weaken the Seeds, as much as two Years longer keeping in the ordinary Way.

All Sorts of Seeds will keep much longer in their Pods, or outer Coverings, where they can be thus preserved; because the Covering not only preserves them from the Injuries of the outward Air, but if the Seeds are not separated from them, they supply them with Nourishment, and thereby keep them plump and fair. But the Seeds of all soft Fruits, such as *Cucumbers*, *Melons*, &c. must be cleansed from the Fruit and Mucilage which surrounds them; otherwise the rotting of these Parts will corrupt and decay the Seeds in a short time.

When Seeds are gathered, it should always be done in dry Weather, when there is no Moisture upon them; and then they should be hung up in Bags, (especially those which Vermin eat) in a dry Room; in which Situation they will keep good, longer than if they were more closely shut up, and the Air excluded from them.

There are but few People so curious as they should be, in saving of their Seeds: some, for want of Judgment, do not distinguish the best Plants of their Kinds, to let grow for Seeds; and others out of Covetousness, to save a great Quantity of Seeds, frequently let a whole Spot of Ground, filled with any particular Sort of Plants, run up to Seed; so that the good and bad Plants are saved indifferently, which is the Occasion of the general Complaint of the Badness of the Seeds which are commonly vended, and is what the Dealers in Seeds should endeavour to remedy.

In the Tables here subjoined, I have given the common *English* Names of the Seeds, opposite to which I have added the *Latin* Names, that the Reader may with Ease turn to the several Articles in the Dictionary; where each Sort is particularly treated of, and Directions are given for their Management.

SENNA-SPURIA, Bastard-Senna.

Doctor *Tournefort*, in his Method, makes the Character of *Senna* to have a flat Pod, for the most part incurved; and the Character of *Cassia* to have swelling Pods, and the Seeds surrounded with Pulp; so that there are many Plants, which agree in the Flower, and outward Appearance, with the *Cassia* and *Senna*, that by this Method are removed from them; therefore Dr. *Herman* has given the Name of *Senna-Spuria* to these Plants.

The Characters of which are;

It hath an irregular rosaceous Flower, (which somewhat resembles a Butterfly-Flower) whose Pointal afterwards becomes a Pod, having for the most part two Rows of Seeds.

The Species are;

I. SENNA-SPURIA *Americana* minor *herbacea*, *plerumque hexapbylla*, *folio obtuso*. *Houft.*
Small

Small *American* herbaceous Bastard-Senna, having for the most part six obtuse Pinnae, or Wings, on each Leaf.

2. SENNA-SPURIA *Americana herbacea, odore gravi, orobi Pannonici foliis mucronatis & hirsutis.* Houst. Stinking herbaceous *American* Bastard-Senna, with Leaves like the *Portugal Bitter-Vetch*, which are pointed and hairy.

3. SENNA-SPURIA *Americana frutescens, foliis mucronatis glabris minoribus, siliquis teretibus, duplici seminum ordine fatis.* Houst. Shrubby *American* Bastard-Senna, with the least smooth pointed Leaves, and taper Pods, containing two Rows of Seeds.

4. SENNA-SPURIA *Americana, plerumque hexaphylla, flore magno, siliqua pentagona alata.* Houst. *American* Bastard-Senna, for the most part having six Wings to the Leaf, a large Flower, and a five-cornered winged Pod.

5. SENNA-SPURIA *Americana herbacea, orobi Pannonici foliis rotundioribus, flore parvo, siliquis erectis.* Houst. *American* herbaceous Bastard-Senna, with rounder *Portugal* bitter-vetch Leaves, a small Flower, and an erect Pod.

6. SENNA-SPURIA *Americana arborea villosa, foliis latis mucronatis, siliquis articulatis.* Houst. Hoary *American* tree-like Bastard-Senna, with broad pointed Leaves, and jointed Pods.

7. SENNA-SPURIA *Americana arborea, siliquis compressis angustis longissimis pendulis.* Houst. *American* tree-like Bastard-Senna, with narrow flat Pods, which are very long, and hang downward.

8. SENNA-SPURIA *Americana tetraphylla herbacea procumbens, siliquis hirsutis.* Houst. *American* four-leav'd herbaceous trailing Bastard-Senna, with hairy Pods.

9. SENNA-SPURIA *Americana, siliqua multiplici, foliis herbae mimosae.* Houst. *American* Bastard-Senna with many Pods, and Leaves like those of the Sensitive Plant.

10. SENNA-SPURIA *Americana frutescens, mimosae foliis, flore parvo, siliquis hirsutis, brevissimis pediculis insidentibus.* Houst. Shrubby *American* Bastard-Senna, with Leaves like those of the Sensitive Plant, a small Flower, and hairy Pods growing on short Footstalks.

11. SENNA-SPURIA *Americana frutescens & procumbens, flore maximo, siliquis glabris.* Houst. Shrubby and trailing *American* Bastard-Senna, with a large Flower, and smooth Pods.

12. SENNA-SPURIA *Americana minima procumbens, foliorum pinnis subrotundis, glabra.* Houst. The least trailing *American* Bastard-Senna, with roundish Wings to the Leaves, which are smooth.

13. SENNA-SPURIA *Americana, foliis herbae mimosae, siliqua singulari, floribus pediculis longioribus insidentibus.* Sloan. Hist. *American* Bastard-Senna, with Leaves like those of the Sensitive Plant, and a single Pod sustained by a long Footstalk.

14. SENNA-SPURIA *frutescens, foliorum pinnis latioribus, caulibus pilosis, siliquis lon-*

gissimis pediculis insidentibus. Houst. Shrubby Bastard-Senna, with broader Wings to the Leaves, a hairy Stalk, and Pods growing on long Footstalks.

15. SENNA-SPURIA *minima procumbens, foliorum pinnis subrotundis, caule pubescente.* Houst. The least trailing Bastard-Senna, with roundish winged Leaves, and a downy Stalk.

These Plants are all of them Natives of the warm Parts of *America*: some of them were discovered in *Jamaica*, and the others were found at *Campechy*, and *La Vera Cruz*, by the late Dr. *William Houstoun*, who sent their Seeds to *England*, where many of the Plants are now growing.

They are propagated by Seeds, which should be sown on a Hot-bed, early in the Spring; and when the Plants come up, they must be frequently watered; and if the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats every Evening, to keep the Bed in a moderate Temperature of Heat: but in the Day-time, when the Sun shines warm, the Glasses should be raised with Stones, to admit fresh Air to the Plants, which will prevent their drawing up weak. When the Plants are about two Inches high, they should be carefully transplanted, each into a separate small Pot, filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, being careful to shade them from the Sun, until they have taken new Root; after which Time they must have fresh Air admitted to them every Day, in proportion to the Warmth of the Season; and so long as the Nights continue cold, the Glasses must be every Evening covered with Mats, soon after the Sun is gone off from the Bed. These Plants do most of them grow in moist Places; so they should be frequently refreshed with Water, and in Summer they must have it given to them plentifully, otherwise they will not thrive.

In about five or six Weeks after planting, if the Plants have thriven well, they will have filled these small Pots with their Roots; therefore they should then be shaken out of the small Pots, and their Roots trimmed, and then planted into larger Pots, and plunged again into the Hot-bed. Such of them as may have grown too tall to remain under the Frames, should be plunged into the Tan-bed in the Stove; but the others may be plunged into the former Hot-bed again, after having stirr'd up the Tan. As these Plants obtain Strength, so they should have a larger Share of fresh Air admitted to them; otherwise they will draw up very weak, and become very tender, and very subject to be infested by Insects, which will render them unsightly, and prevent their Flowering.

The first, second, fourth, fifth, eighth, ninth, twelfth, thirteenth and fifteenth Sorts, frequently flower the first Season; but if they do not flower pretty early in *August*, they will not produce ripe Seeds, unless they are placed in a warm Stove, and plunged into the Bark-bed; so that where this Convenience

venience is wanting, they must be raised early in the Spring, and brought as forward as possible in the Spring Season, otherwise good Seeds cannot be obtained in this Country.

The third, sixth, seventh, tenth, eleventh and fourteenth Sorts, are abiding Plants, which grow shrubby; therefore should be inured to bear a large Share of Air, that they may become hardy in Autumn; for these may be placed in the dry Stove in Winter, where, if they are kept moderately warm, they will thrive and produce their Flowers in plenty. In the summer Season, these Plants may be placed abroad in a warm Situation, where they are secured from strong Winds; but they must be removed into the Stove in September, when the Nights begin to grow cold; otherwise they will lose their Leaves, and become very unsightly. Most of these Plants produce their Flowers in Winter, which renders them valuable, because in that Season there are not many Plants which make a better Appearance. The seventh Sort will grow to the Height of twelve or fourteen Feet, and will abide many Years. This constantly produces Flowers in the middle of Winter; which being large, and produced in Clusters at the Extremity of the Branches, make a fine Appearance at that Season.

SERJANIA.

This Name was given to this Genus of Plants by Father Plumier, who discovered them in America, in Honour to the Reverend Father Philip Sergeant, who was of the Order of the Minims, and a Person well versed in the Knowledge of Botany and Physic.

The Characters are;

It hath a rose-shaped Flower, consisting of four or more Leaves, which are placed in a circular Order; from whose Flower-cup arises the Pointal, which afterward becomes a Fruit composed of three Cells, having three Wings, and each Cell containing one round Seed.

The Species are;

1. SERJANIA scandens, polyphylla & racemosa. Plum. Nov. Gen. Climbing and branching Serjania, with many Leaves.

2. SERJANIA scandens enneaphylla & racemosa. Plum. Nov. Gen. Climbing and branching Serjania, with nine Leaves.

3. SERJANIA scandens, triphylla & racemosa. Plum. Nov. Gen. Climbing and branching Serjania, with three Leaves.

These Plants were found by the late Dr. William Houstoun, at La Vera Cruz and Campechy; where they grow to a great Height, whenever they grow near large Trees to support them; for they have Tendrils by which they fasten themselves to whatever Trees grow near them.

They may be propagated either by Seeds, or from Layers; for if their Branches are laid in the Ground in the Spring, they will make good Roots before Winter; so may be taken off from the old Plants, and planted into separate Pots.

If they are propagated by Seeds, (which must be obtained from the Countries of their natural Growth, for they do not perfect them

in England) they must be sown on a Hot-bed early in the Spring; and when the Plants are come up, and are fit to transplant, they should be each put into a separate Pot, filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; after which Time they should have a large Share of free Air admitted to them every Day, when the Weather is warm, otherwise they will draw up too weak. As these Plants advance, so their Branches must be supported by Stakes, to prevent their trailing over other Plants, which grow near them; and when their Shoots are too tall to remain under the common Frames, they should be shifted into larger Pots, and plunged into the Bark-bed in the Stove; where they must be placed on the Backside, with Granadilla's and other climbing Plants, which should be supported by an Espalier, on which they will climb to the Top of the Stove, and make a Variety, as their Leaves always remain green.

In the summer Season, when the Weather is warm, they should have a great Share of free Air admitted to them, by drawing down the Glasses of the Stove every Day; but they are too tender to thrive in the open Air in England, even in the middle of Summer; so they should be constantly kept in the Stove, where they should have a moderate Degree of Warmth in Winter, in which they will thrive better than in a greater Share of Heat.

SERRATULA, Saw-wort.

The Characters are;

It hath a flosculous Flower, consisting of several Florets, divided into many Parts resting on the Embryo, and contained in a scaly Empalement, like to the greater Centaury, from which this differs in having smaller Heads, and from the Knapweed in having the Borders of the Leaves cut into small sharp Segments, resembling the Teeth of a Saw.

The Species are;

1. SERRATULA vulgaris, flore purpureo. C. B. P. Common Saw-wort, with a purple Flower.

2. SERRATULA flore candido. C. B. P. Common Saw-wort, with a white Flower.

3. SERRATULA Virginiana, foliis rigidis. Par. Bat. Saw-wort of Virginia, with stiff Leaves.

4. SERRATULA præalta altera, angustifolia. Bocc. Mus. The tallest Saw-wort, with a narrow Plantain-leaf.

5. SERRATULA præalta centauroides montana Italica. Bocc. Mus. The tallest Saw-wort of the Italian Mountains, resembling Centaury.

6. SERRATULA Novboracensis altissima, foliis doria mollibus subincanis. Par. Bat. The tallest Saw-wort of New York, with soft doria Leaves, which are white on the Under-side.

The first and second Sorts are pretty common in the Woods, in divers Parts of England, so are seldom admitted into Gardens; but as they are Plants which will grow in the closest Shade, they may be introduced to plant under

under Trees in large Plantations, where they will thrive and flower extremely well, and add to the Variety. These Plants are easily propagated by parting of their Roots in Autumn, so as that they may be well rooted before Spring; otherwise they will not flower very strong the following Season.

The third and sixth Sorts are Natives of North America, where they are very common in their Woods. These are hardy Plants, and will endure the Cold of our ordinary Winters very well; but if they are planted in the full Ground, they should have a moist light Soil; otherwise they will perish in dry Weather, unless they are duly watered. The third Sort seldom rises above two Feet high in this Country; but the sixth Sort will sometimes grow to the Height of five or six Feet, if it is planted in a moist rich Soil; but this last Sort is very late in Flowering, so that if the Season proves cold, it many times will not flower in this Country. These are both abiding Plants, which may be propagated by parting of their Roots; the best Time for which is in the Spring, just before they begin to shoot; for as these continue growing in Autumn, until the Frost puts a Stop to them, it would be dangerous to transplant them in Winter.

The fourth and fifth Sorts grow wild in the mountainous Parts of Italy and Spain, but are hardy enough to resist the Cold of this Climate; so may be intermixed with the other Sorts, in Woods or under Plantations of Trees, where they will make an agreeable Variety. These Plants may be propagated by Seeds, which should be sown early in the Spring on a Border of fresh Earth; and when the Plants appear, they should be carefully weeded, and in very dry Weather they must be frequently watered; which will bring them forward, so that they will soon be fit to transplant. When they are removed, they must be planted in a shady Border, about six Inches apart, and kept duly watered, until they have taken new Root; after which Time they will require no farther Care, but to keep them clear from Weeds, till Michaelmas, when they should be transplanted where they are designed to remain.

SESELI, Wild-spignel.

The Characters are;

It hath a rose and umbellated Flower, consisting of several Leaves placed in a Circle, and resting on the Empalement, which afterward becomes a Fruit, composed of two long Seeds, which are channelled. To these Notes must be added, That the Leaves are broader and shorter than those of Fennel.

The Species are:

1. SESELI perenne, folio glauco breviori. Vaill. Perennial Wild-spignel, with a shorter sea-green Leaf.

2. SESELI perenne, folio glauco longiori. Vaill. Perennial Wild-spignel, with a longer sea-green Leaf.

3. SESELI, quæ ferulae facie, thapsia sive Turbith Gallorum. J. B. Boerb. Ind. alt. Wild-spignel, with the Face of Giant-fennel, supposed to be the Turbith of the Gauls.

4. SESELI, quæ Saxifraga Pannonica. Clus. Hist. Boerb. Ind. alt. Wild-Spignel, or the Portugal Saxifrage of Clusius.

The three first Sorts are abiding Plants, whose Roots will continue several Years; but the fourth Sort is a biennial Plant, which perishes soon after it has perfected its Seeds.

These may be propagated by sowing of their Seeds, which is best done in the Autumn; for when the Seeds are sown in the Spring, they frequently lie in the Ground till the next Year, before the Plants will appear; whereas those which are sown in the Autumn, always rise the following Spring. These Seeds should be sown in Drills, about eighteen Inches asunder, in a Bed of fresh Earth, where they are designed to remain; and in the Spring, when the Plants come up, they should be thinned where they are too close, leaving them about six Inches Distance in the Rows; after this the Plants will require no farther Care, but to keep them constantly clear from Weeds, and the second Season they will produce Seeds. These Sorts which are permitted to remain after they have seeded, should have the Ground gently dug every Spring between the Rows, to loosen the Earth; but there should be Care taken not to injure their Roots with the Spade. The Plants love a moist Soil, for when they are sown on a dry Soil, they do not thrive near so well, and seldom perfect their Seeds, unless the Season proves moist, or they are duly watered.

SHERARDIA.

This Name was given to this Genus of Plants by Mr. Vaillant, who was Professor of Botany at Paris, in Honour to Dr. William Sherard, who was the most famous Botanist of the Age.

The Characters are;

It hath a labiated Flower consisting of one Leaf, which is divided into five Parts at the Brim; the upper Lip being divided into two, and the under Lip into three Parts: the Ovary, which is at the Bottom of the Flower-cup, afterward becomes a dry Capsule, containing two oblong Seeds. To these Notes may be added, That the Leaves grow opposite by Pairs.

The Species are;

1. SHERARDIA repens nodiflora. Vaill. Nov. Gen. Creeping Sherardia, with Flowers growing in round Heads.

2. SHERARDIA repens, folio subrotundo crasso, nodiflora. Vaill. Nov. Gen. Creeping Sherardia, with a roundish thick Leaf, and Flowers collected in round Heads.

3. SHERARDIA incana nodiflora. Vaill. Nov. Gen. Hoary Sherardia, with Flowers collected into round Heads.

4. SHERARDIA nodiflora, stachadis serrati folii folio. Vaill. Nov. Gen. Round-flowering Sherardia, with a Leaf like the sawed-leaved Stoechas.

5. SHERARDIA ocymi folio lanuginoso, flore purpureo. Vaill. Nov. Gen. Woolly Sherardia, with a Basil-leaf, and a purple Flower.

6. SHERARDIA teucrii folio, flore purpureo. Vaill. Nov. Gen. Sherardia with a Tree-germander Leaf, and a purple Flower.

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7. *SHERARDIA frutescens, teucrii folio, flore caeruleo purpurascente amplissimo. Vaill. Nov. Gen.* Shrubby Sherardia, with a tree-germander Leaf, and a large purplish blue Flower.

8. *SHERARDIA teucrii folio, flore coccineo. Vaill. Nov. Gen.* Sherardia with a tree-germander Leaf, and a scarlet Flower.

9. *SHERARDIA spicata, folio angusto serrato, flore caeruleo. Houst.* Spiked Sherardia, with a narrow sawed Leaf, and a blue Flower.

10. *SHERARDIA spicata, flore purpureo, seminibus majoribus, longioribus & laxius digestis. Houst.* Spiked Sherardia, with a purple Flower, and larger longer Seeds, which are loosely disposed in the Spike.

11. *SHERARDIA verbenæ folio subrotundo crasso, floribus caeruleis, spicâ longissimâ & crassissimâ. Houst.* Sherardia with a thick roundish vervain Leaf, and blue Flowers, growing in a very long thick Spike.

12. *SHERARDIA foliis oblongis serratis, flore caeruleo, spicâ longissimâ. Houst.* Sherardia with oblong sawed Leaves, a blue Flower, and a very long Spike.

13. *SHERARDIA arborescens nodiflora, foliis rugosis & serratis, flore purpureo. Houst.* Tree-like Sherardia, with rough sawed Leaves, and purple Flowers growing in a round Head.

The first of these Plants is a Native of Europe, so will thrive in the open Air in this Country. The Seeds of this Kind should be sown in the Spring, on a Bed of light fresh Earth, in a warm Situation, and where the Plants are designed to remain (for they do not bear transplanting very well). And when the Plants are come up, they should be thinned so as to leave them a Foot asunder; and if they are kept clear from Weeds, they will require no farther Care. The Branches of this Plant trail on the Ground, and send forth Roots from their Joints, whereby they may be propagated; but if they are not confined, they will not produce many Flowers.

All the other Sorts are Natives of the warm Parts of America, so are too tender to thrive in the open Air of England; but as most of them are annual, they may be raised by sowing of their Seeds on a Hot-bed; and if the Plants are brought forward early in the Spring, they will flower and produce ripe Seeds before Winter.

The second Sort was found by Dr. William Houstoun, growing plentifully in Jamaica. This Plant trails its Branches on the Ground, emits Roots from the Joint as the former Sort, so doth not produce many Flowers.

The fourth Sort was found in great Plenty, at La Vera Cruz, by Dr. Houstoun, as were the ninth, tenth, eleventh, twelfth and thirteenth Sorts, at Campechy, by the same Gentleman.

The third, fifth and sixth Sorts, grow plentifully in Jamaica, and several other Places in the West-Indies, from whence I have received their Seeds.

The seventh Sort is a very specious Plant, which merits a Place in every good Collection of Plants. This produces long Spikes of large blue Flowers, which continue a long

Time, and make a fine Appearance. This is also an annual Plant, notwithstanding it has the Epithet of Shrubby given to it; for it always flowers the same Summer it is raised: but if it is not brought forward early in the Spring, and constantly kept in the Stove or Glass-case, it will not perfect Seeds in this Country. The Seeds of this Kind were sent to England by Mr. Robert Millar, Surgeon, who gathered them near Panama.

The thirteenth Sort rises to be nine or ten Feet high, and hath a woody Stem. This will abide many Years, provided it is preserved in a Stove in Winter. During the summer Season, this Sort may be placed in the open Air in a warm Situation, and in hot Weather must be frequently watered; but in Autumn, when the Nights grow cold, the Plants must be removed into the Stove, and in Winter they should have a moderate Share of Heat; with which Management the Plants will thrive very well.

All these Plants are propagated by Seeds, which should be sown early in the Spring on a moderate Hot-bed; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with light rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun every Day, until they have taken new Root; after which Time they should have a large Share of free Air admitted to them in warm Weather, and they must be frequently watered. When the Plants have filled these Pots with their Roots, they must be shifted into larger Pots; and if there is Room for the Plants to grow under the Glasses of the Hot-bed, without being scorched by the Sun, they should be plunged into the same Bed again; but if there is not Room, they must be placed in the Stove, where they may have Room to grow in Height. In July those Sorts which are annual, will begin to flower, and their Seeds will ripen the Beginning of September.

SICYOIDES, Single-seeded Cucumber.

The Characters are;

It hath an expanded bell-shaped Flower, consisting of one Leaf, which is cut into several Segments at the Brim; of these Flowers, some are Male, which adhere to no Embryo; and others are Female, which rest on the young Fruit, which is afterward enlarged to the Size of an almond Kernel, and is flat and prickly, containing one Seed of the same Shape.

The Species are;

1. *SICYOIDES Americana, fructu echinato, foliis angulatis. Inst. R. H. American Sicyoides*, with a prickly Fruit, and angular Leaves.

2. *SICYOIDES Americana, fructu echinato, foliis laciniatis. Plum. American Sicyoides*, with a prickly Fruit, and jagged Leaves.

These Plants are preserved in some curious Gardens, for the sake of Variety; but as they have little Beauty, and are not useful, so they are not much cultivated in England. They are both annual Plants, which may be propagated by sowing of their Seeds in the Beginning of April, on a Border of fresh Earth, in

in the Place where they are designed to remain; and in about a Fortnight's Time the Plants will appear; which at first are very like Cucumber-plants, and, as they grow, will trail on the Ground, and fasten themselves to whatever Plants grow near them, by their Tendrils; so that they should be either sown near a Hedge, where they may climb up, or be allowed a considerable Share of Room, otherwise they will run over the Plants which are near them. When the Plants are come up, they will require no farther Care, but to keep them clear from Weeds, and to thin them where they grow too close together. In June they will produce their Flowers, and in August the Seeds will ripen, which, if permitted to scatter, will produce a Supply of young Plants the following Spring, without any Care.

SIDERITIS, Ironwort or All-heal.

To this Article must be added;

1. *SIDERITIS Anglica, strumosa radice.* Park. Theat. English Ironwort, with a strumose Root, commonly called Clowns All-heal.

2. *SIDERITIS arvensis rubra.* Park. Theat. Narrow-leaved All-heal or Iron-wort.

3. *SIDERITIS foliis hirsutis, profunde crenatis.* C. B. P. Ironwort or All-heal with hairy crenated Leaves.

4. *SIDERITIS Hispanica erecta, folio angustiore.* Inst. R. H. Upright Spanish All-heal, with a narrow Leaf.

5. *SIDERITIS Hispanica crenata procumbens, flore albo, major.* Inst. R. H. Greater trailing Spanish All-heal, with a white Flower.

6. *SIDERITIS Hispanica bituminosa angustifolia crenata.* Inst. R. H. Spanish All-heal, with a bituminous Scent, and a narrow crenated Leaf.

7. *SIDERITIS Hispanica foetidissima glabra, flore purpurascens, & comâ canescente.* Inst. R. H. Spanish stinking smooth All-heal, with a purplish Flower, and whitish Tops.

8. *SIDERITIS Hispanica frutescens, seu lignosior.* Inst. R. H. Shrubby or more woody Spanish All-heal.

9. *SIDERITIS Pyrenaica hyssopifolia minima procumbens.* Inst. R. H. The least trailing hyssop-leaved All-heal of the Pyrenees.

10. *SIDERITIS montana, trifido folio.* Barrel. Icon. Mountain All-heal, with a trifid Leaf.

11. *SIDERITIS Cretica maxima, ocymastri Valentini facie.* Tourn. Cor. The greatest All-heal of Candy, with the Face of *Ocymastrum* *Valentinum*.

12. *SIDERITIS Cretica tomentosa candidissima, flore luteo.* Tourn. Cor. The whitest woolly All-heal of Candy, with a yellow Flower.

The first Sort here mentioned grows plentifully by the Sides of Ditches, and in other moist Places; in divers Parts of England, so is very rarely introduced in Gardens, because it is a very bad Weed, where-ever it once gets Place; for the Roots creep very far under Ground, and will soon overrun a large

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Spot of Ground, if they are not confined. This Plant received the Name of *Clowns All-heal*, from Mr. Gerard, who was looking for Herbs in Kent, where he saw a Man who had cut his Leg to the Bone with a Scyth, as he was mowing the Grass, to whom he offered his Assistance to cure his Wound; which the Countryman churlishly refusing, crept to the Ditch-side, where there was plenty of this Plant growing; some of which he gathered and bruised, and applied it to the Wound, tying it close with his Handkerchief, which in few Days healed the Wound, without any other Application; for which Reason Gerard has recorded the Story in his Herbal, for the Benefit of Mankind.

The second Sort is also a Native of England, and grows amongst the Corn, or other Crops, on arable Land. This is an annual Plant, which perishes soon after it has ripened Seeds.

The other Sorts are most of them biennial Plants, which commonly perfect their Seeds the second Summer, and seldom continue much longer. These may be all propagated by Seeds, which should be sown in Autumn, soon after they are ripe; for when they are kept out of the Ground till Spring, they very often fail. These Seeds should be sown on a Bed of fresh undunged Earth, in an open Situation; and when the Plants come up, they should be thinned where they grow too close; and if they are kept clear from Weeds, it is all the Culture they require. If, when these Plants are established in a Garden, their Seeds are permitted to scatter, the Plants will come up, and maintain their Place, provided they are not overborn by large Weeds.

All the Sorts of All-heal are supposed to have an astringent Quality, and are accounted good to heal Wounds, and may be applied either inwardly or outwardly.

SILAUM, Meadow-Saxifrage.

The Characters are;

It hath a rose and umbellated Flower, consisting of several Leaves, placed circularly, and resting upon the Empalement, which afterward becomes a Fruit composed of two short channelled Seeds. To which Notes must be added, That the Leaves are very narrow, and the Flowers are of a pale yellow Colour.

The Species are:

1. *SILAUM quibusdam, flore luteolo.* J. B. Common Meadow-Saxifrage.

2. *SILAUM quod Ligusticum, ferulae folio.* Inst. R. H. Boerb. Ind. alt. Saxifrage with the Leaf of Giant Fennel.

3. *SILAUM quod Ligusticum Creticum, folio fœniculi, caule nodoso.* Tourn. Cor. Boerb. Ind. Candy Meadow-saxifrage, with a Fennel-leaf, and a knobby Stalk.

4. *SILAUM quod Ligusticum, cicutæ folio, glabrum.* Tourn. Boerb. Ind. alt. Meadow-Saxifrage, with a smooth Hemlock-leaf.

The first Sort is directed by the College of Physicians to be used in Medicine: this grows wild in Meadows, and other moist Pastures, in divers Parts of England; but the

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other

other Sorts are not Natives of this Country, so are only to be met with in Botanic Gardens, where they are preserved for the sake of Variety.

All these Sorts are propagated by Seeds, which may be sown in Autumn on a Border of fresh Earth in a shady Situation; and when the Plants are come up, they will require no farther Care, but to keep them clear from Weeds, and, where they grow too close, to thin them, so as to leave them about eight or ten Inches asunder, which may be done by houghing of them in the same manner as is practised for Carrots. These Plants will flower and seed the second Summer, and the Roots of the three first Sorts will abide some Years; but the fourth Sort commonly perishes soon after it has produced Seed.

SILER, Sefeli or Sermountain.

The Characters are;

It hath a rose and umbellated Flower, consisting of several Leaves, which are ranged orbicularly, and rest on the Empalement, which becomes a Fruit composed of two large oblong furrowed Seeds, having foliaceous Ridges on one Side. To these Notes may be added, That the Lobes of the Leaves are large, long, and intire, excepting their Extremity, where they are slightly cut into three Parts.

The Species are;

1. SILER *montanum majus*. Mor. Umb. Greater Sermountain.
2. SILER *montanum angustifolium*. Park. Narrow-leaved Sermountain.

The first Sort is used in Medicine by the Direction of the College of Physicians. The Seeds of this Sort are the *Semen Seseleos* of the Shops, which enters in Compositions; and the green Herb also is used, for which some of the People who supply the Shops, often impose on their Customers the *Mountain Oser*, which, by translating *Siler* an *Oser*, may afford them some pretence.

The second Sort differs from the first, in being somewhat less, and having narrow Leaves: this is found wild in *Austria*, and the former Sort grows on the *Alps* and *Apennines*, and other mountainous Parts of *Italy* and *Spain*.

These Plants may be propagated by Seeds, which should be sown in Autumn (soon after they are ripe) on a Border of fresh undunged Earth; and in the Spring, when the Plants will appear, they should be kept constantly clear from Weeds, and in very dry Weather should be watered, which will greatly promote their Growth. Where the Plants come up too close together, they should be thinned so as to leave them three or four Inches apart, which will be sufficient Room for them the first Season; and at *Michaelmas*, when their Leaves decay, some of the Plants may be carefully taken up, so as not to cut or break their Roots, and transplanted into a moist shady Border, about eighteen Inches asunder, where they may remain for good. If these Plants thrive well, they will produce Seeds the second Season, otherwise it will be the third Summer before they flower and seed;

after which the Roots will abide many Years, and increase greatly in their Size, and will produce Seeds every Year.

The Culture which these Plants require, is only to keep them clear from Weeds, and every Spring, just before the Plants put out their Leaves, to dig the Ground between them gently, so as not to injure their Roots; and when their Flower-stems are advanced, to place some Sticks down by them, to which their Stems should be fastened with Bafs, to support them from being broken down by Winds; for as these Stems rise to the Height of four or five Feet, so when their Umbels of Seeds are formed, which are generally pretty large and heavy, they often occasion their Stems falling to the Ground, where they are not supported.

These Plants flower the latter End of June, and their Seeds ripen toward the latter End of August, or the Beginning of September.

SISYMBRIUM, Water-creffes.

The Characters are;

It hath a Flower composed of four Leaves, which are placed in form of a Cross, out of whose Empalement rises the Pointal, which afterward becomes a Fruit or Pod, which is divided into two Cells by an intermediate Partition, to which the Valves adhere on both Sides, and furnished with Seeds which are roundish. To these Marks must be added, That the whole Appearance of the Plants is peculiar to the Species of this Genus.

The Species are;

1. SISYMBRIUM *aquaticum*. Matth. Common Water-creffes.
2. SISYMBRIUM *aquaticum, foliis minoribus, præcocius*. Raii Syn. Early-flowering Water-creffes, with smaller Leaves.
3. SISYMBRIUM *aquaticum, raphani folio, siliquâ breviori*. Inst. R. H. Water-radish.
4. SISYMBRIUM *aquaticum, foliis in profundas lacinias divisis, siliquâ breviori*. Inst. R. H. Water-radish with deeply jagged Leaves.
5. SISYMBRIUM *palustre repens, nasturtii folio*. Inst. R. H. Water-rocket.
6. SISYMBRIUM *palustre minus, siliquâ asperâ*. Inst. R. H. The lesser Marsh-rocket, with a rough Pod.
7. SISYMBRIUM *erucæ folio glabro, flore luteo*. Inst. R. H. Common Winter-creffes.
8. SISYMBRIUM *erucæ folio glabro, flore pleno*. Inst. R. H. Winter-creffes, with a double Flower.
9. SISYMBRIUM *erucæ folio glabro, minus & præcocius*. Inst. R. H. Small early-flowering Winter-rocket.
10. SISYMBRIUM *erucæ folio, aspero, flore luteo*. Inst. R. H. Winter-creffes with a rough rocket Leaf, and yellow Flower.

The first and second Sorts of Water-creffes grow promiscuously in standing Waters in most Parts of *England*, and are indifferently gathered for Use. These Plants have of late Years been generally used as Sallet-herbs in the Spring of the Year, and are by many People preferred to all other Sorts of Sallets for

for the agreeable warm bitter Taste; and being accounted an excellent Remedy for the Scurvy, and to cleanse the Blood, as also a good Diuretic, they have greatly obtained with most People. These are generally gathered in the Ditches, and in other standing Waters near London, to supply the Markets; but whoever hath a mind to cultivate them, may easily do it by taking some of the Plants from the Places of their natural Growth, early in the Spring, being careful to preserve their Roots as intire as possible, and plant them into Mud, and then let the Water in upon them by degrees. When they have taken Root, they will soon flourish and spread over a large Compass of Water: they should not be cut the first Season, but suffered to run to Seed, which will fall into the Water, and furnish a sufficient Supply of Plants afterward.

But where the Water is so deep, that it will not be easy to plant these Plants, the best Method will be to get a Quantity of the Plants, just as their Seeds are ripening, and throw them on the Surface of the Water, where they are designed to grow; and their Seeds will ripen, and fall to the Bottom, where they will take Root, and produce a Supply of the Plants. These Plants produce Seed the latter End of June, or the Beginning of July, which is the proper Time for this Work.

The third, fourth, fifth and sixth Sorts, are Water-plants, which grow in standing Waters; so are not admitted into Gardens, except for the sake of Variety.

The seventh and ninth Sorts grow wild on dry Banks in several Parts of England: these were formerly used as a Winter Sallet; but since there has been a great Number of other Herbs introduced into the English Gardens, they have been intirely rejected. These may be propagated by Seeds, which should be sown soon after they are ripe; and when the Plants are come up, they should be houghed, to separate them where they are too close, as also to destroy the Weeds, which is all the Culture they require. The Summer following they will produce Seed, and the Plants perish soon after. But if the Seeds are permitted to scatter, the Plants will come up, and become troublesome Weeds.

The eighth Sort is a Variety of the seventh, which accidentally arose from Seeds, and is preserved in some curious Gardens, for having a double Flower. This is propagated by parting of the Roots, so that in order to preserve this Kind, the Plants should not be suffered to send forth too many Flower-stems, lest they should exhaust the Root too much to send forth any Side-heads for parting. The best Time to transplant and part these Roots, is at Michaelmas, when they should be planted into a Bed or Border of fresh undunged Earth, in an open Exposure.

The tenth Sort is very like the seventh, from which it differs in having a rough Leaf, so may be cultivated in the same manner; tho' these are rarely allowed a Place in any Gardens, unless for the sake of Variety.

SISYRINCHIUM, Spanish Nut.

The Characters are;

It hath a Flower resembling the IRIS, from which it differs in having a double Root, one lying over the other, after the same manner, as those of the CROCUS and GLADIOLUS.

The Species are;

1. *SISYRINCHIUM majus, flore luteâ maculâ notato. C. B. P. Greater Spanish Nut, with a Flower marked with a yellow Spot.*

2. *SISYRINCHIUM majus, flore albâ maculâ notato. C. B. P. Greater Spanish Nut, with a Flower marked with a white Spot.*

3. *SISYRINCHIUM medium. C. B. P. Middle Spanish Nut.*

4. *SISYRINCHIUM Creticum montanum, angustissimo folio. Tourn. Cor. Mountain Sisyrinchium of Candy, with a very narrow Leaf.*

5. *SISYRINCHIUM Africanum, foliis longissimis, flore albo, radice venenatâ. African Sisyrinchium, with very long Leaves, a white Flower, and a poisonous Root.*

The three first Sorts grow wild in Portugal and Spain, where the Roots are sought after, and dug up by Children and the Shepherds, who eat them, as also the Hogs; for they are sweet, and in Taste resemble the Earth-nut. The fourth Sort was discovered in the Island of Crete by Dr. Tournefort, who sent it to the Royal Garden at Paris.

These Plants are preserved by the Curious for their Flowers, which make a fine Appearance, when they are in Beauty, which is commonly in May, or the Beginning of June, about the same Time with the *Bulbous Iris*. The Flowers come out alternately from their Sheaths or Coverings, after the manner of the *Iris*; so that there is seldom more than one Flower open upon each Stalk at one time; but they succeed each other: for there are commonly four or five Flowers produced on each Stalk, when the Roots are strong. These Flowers are in some of a fine blue Colour, spotted with Yellow; and in other Sorts they are of a pale purple Colour, spotted with White.

The four first Sorts are hardy Plants, which are multiplied by Off-sets, and may be treated in the same manner as the *Bulbous Iris*, to which the Reader is desired to turn, where there are full Directions exhibited, both for the propagating them by Off-sets and Seeds, with which Management these Flowers may be cultivated.

The fifth Sort was brought from Africa, where the Inhabitants use the Root to fuddle the Fish in the Rivers, in order to catch them in plenty. The green Leaves of this Sort are poisonous; for as a Tub of these Plants, which were bringing to England, was placed on the Deck of the Ship, some Hogs, getting to it, eat down all the Leaves; which swelled two of the Hogs, and killed them.

This Plant, being a Native of a warm Country, is too tender to live in this Climate, unless it is preserved in a good Stove; so the

Roots

Roots should be planted into Pots filled with light rich Earth, and plunged into the Bark-bed in the Stove, where if it is preserved in a kindly Warmth, the Roots will multiply greatly. The Leaves of this Sort die away in Winter, and new ones arise in the Spring; so the best Time to transplant the Roots is, just before they put out new Leaves, which is commonly in the Beginning of April; at which time the Bark-bed should be stirred up and renew'd with some fresh Tan, and the Pots must be plunged again, and frequently refreshed with Water, in warm Weather, which will make them grow very vigorous; but during the winter Season, while the Leaves are decayed, they must not have much Wet, lest it rot the Roots.

SIUM, Water Parsnip.

The Characters are;

It hath a rose-shaped umbellated Flower, consisting of several Petals, which are commonly equal, and placed orbicularly, resting upon the Empalement, which afterward becomes a roundish Fruit, composed of two Seeds, which are gibbous and furrowed on one Side, but plain on the other. To these Notes must be added, That the Leaves are joined together, and adhere to the Rib, with an odd Lobe at the End.

The Species are;

1. SIUM *five Apium palustre, foliis oblongis.* C. B. P. Water Parsnip, with oblong Leaves.

2. SIUM *umbellatum repens. Ger. Emac.* Creeping Water Parsnip.

3. SIUM *latifolium. C. B. P.* Broad-leaved Water Parsnip

4. SIUM *palustre alterum, foliis serratis.* Inst. R. H. Another Water Parsnip, with sawed Leaves.

5. SIUM *foliorum conjugationibus laciniatis.* Inst. R. H. Water Parsnip with the Wings of the Leaves jagged.

6. SIUM *aquaticum, ad alas floridum. Mor. Umb.* Water Parsnip with Flowers growing at the Wings of the Leaves.

7. SIUM *minimum umbellatum, foliis variis.* Pluk. Alm. The least Water Parsnip, with variable Leaves.

8. SIUM *alterum, olusatrici facie. Lob. Icon.* Long-leaved Water Hemlock.

9. SIUM *arvense, five segetum. Inst. R. H.* Corn-Parsley or Honewort.

10. SIUM *aromaticum, Sison officinarum. Inst. R. H.* Stone-parsley, or German Amomum.

The first, second, third, seventh and eighth Sorts, grow pretty common in Ditches, Ponds, and other standing Waters, in divers Parts of England; so are not cultivated, because they will not live on dry Ground. The second Sort is directed to be used in Medicine by the College of Physicians, and is esteemed very good in scrophulous Cases. The first Sort is by some People mistaken for *Water-cresses*, and is sometimes gathered as such and eaten, tho' they are very different Plants.

The eighth Sort is a very poisonous Plant, which was by Dr. Wepfer taken for the *Hemlock* of the Antients who; has written a large Treatise of this Plant, in which he has

mentioned a Number of Instances of the noxious Quality thereof: so that this Plant should be extirpated from Places near Habitations, to prevent any Mischief which may happen by Persons using of it, thro' Ignorance.

The fourth, fifth and sixth Sorts, grow in standing Waters in France, Germany, and some other Parts of Europe, but are not Natives of this Country. These are sometimes preserved in Botanic Gardens for Variety-sake, but are not used in Medicine.

The ninth and tenth Sorts grow on dry Banks, and under Hedges, in several Parts of England, so are rarely cultivated in Gardens. The ninth Sort has been by some Writers greatly esteemed for discussing hard Swellings of the Face, which by some Country People are called *Hones*, so the Name of *Honewort* was given to this Plant, on account of that Quality. The Seeds of the tenth Sort are used in Medicine, as one of the lesser warm Seeds. This is called *Amomum* by the Germans, tho' it is not what the Antients meant by that Name.

All these Sorts may be cultivated by Seeds, which should be sown in the Autumn soon after they are ripe: those Sorts, which grow in standing Waters, must be scattered into such Places; but the other Sorts may be sown on a shady Border, where the Plants will come up in the Spring, and require no farther Care, but to keep them clear from Weeds, and, where they grow too close together, to thin them, so as to allow them Room to grow. The second Year these Plants will produce Flowers and Seeds, soon after which the Roots will perish.

SMILAX, Rough Bindweed.

To this Article must be added;

1. SMILAX *Orientalis, sarmentis aculeatis, altissimas arboris scandentibus, foliis non spinosis. Tourn. Cor.* Eastern rough Bindweed, with prickly Shoots, and smooth Leaves.

2. SMILAX *lævis, lauri folio, baccis nigris. Catesb. Hist. Nat. Carol.* Smooth Bindweed, with a bay Leaf, and black Berries.

3. SMILAX *non spinosa humilis, folio aristolochiæ baccis rubris. Catesb. Hist. Nat. Car.* Dwarf smooth Bindweed, with a birthwort Leaf, and red Berries.

4. SMILAX *bryoniæ nigræ foliis, caule spinoso, baccis nigris. Catesb. Hist. Nat. Carol.* Bindweed with black briony Leaves, a prickly Stalk, and black Berries.

5. SMILAX *Caroliniana, stipite quadrato leni, foliis angustis asperis, auriculis ad basim angulosis. Pluk. Phyt. Carolina* Bindweed, with square smooth Shoots, and rough narrow Leaves, which have cornered Ears at their Base.

6. SMILAX *foliis latis, in margine spinosis, Caroliniana, stipite leni quadrato. Pluk. Phyt. Carolina* Bindweed, with broad Leaves, having Spines on their Edges, and a smooth square Shoot.

7. SMILAX *aspera Bermudensis, grandioribus foliis cordiformibus, radice surculosa. Pluk. Phyt.* Rough

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Rough Bindweed of *Bermudas*, with larger heart-shaped Leaves, and a Root full of Shoots.

8. *SMILAX claviculata, Hederæ folia, tota levis, à Terrâ marianâ. Pluk. Phyt.* Smooth Bindweed with Tendrils, and an Ivy Leaf from *Maryland*.

9. *SMILAX viticulis asperis, Virginiana, foliis angustis lævibus, nullis auriculis prædita. Pluk. Phyt.* Virginian Bindweed with rough Shoots, and smooth narrow Leaves having no Ears.

10. *SMILAX Virginiana, spinis innocuis armata, latis Canellæ foliis, radice arundinaceâ crassâ & carnosâ. Pluk. Phyt.* Virginian Bindweed, armed with innocent Spines, broad Cinnamon Leaves, and a thick fleshy Root, called bastard *China*.

11. *SMILAX Americana levis, Canellæ foliis, baccis rubris.* Smooth American Bindweed, with Cinnamon Leaves, and red Berries.

12. *SMILAX aspera, Americana, Aristolochiæ foliis longioribus, ad basim auriculatis.* Rough American Bindweed with longer Birthwort Leaves, with Ears at their Base, whose Root is the *Zarza Parilla* of the Shops.

13. *SMILAX Americana levis, Tamni folio, claviculis longioribus donatis.* Smooth American Bindweed, with a black briony Leaf, sending forth long Tendrils.

14. *SMILAX Americana, levis, latissimo folio, auriculis ad basim rotundioribus.* Smooth American Bindweed, with a very broad Leaf, having round Ears at the Base.

15. *SMILAX unifolia, bumillima. Inst. R. H.* The lowest Bindweed or one Blade.

16. *SMILAX aspera racemosa, polygonati folio. Inst. R. H.* Rough branching Bindweed, with a Solomons-seal Leaf.

17. *SMILAX spicata, Polygonati folio. Inst. R. H.* Spiked Bindweed with a Solomons-seal Leaf.

The first Sort here mentioned, was discovered by Dr. *Tournefort* in the *Levant*. This is a very rambling Plant, which climbs up Trees, and rises to a great Height in the Places of its Natural Growth; but is an humbler Plant in this Country. This may be propagated by Seeds, or from Off-sets taken from the old Roots, and is hardy enough to live in the open Air in this Country, provided it is planted under Trees, where it may be a little protected in Winter.

The second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth Sorts, are Natives of *Carolina, Virginia* and the other northern Parts of *America*, where they grow in the Woods in the greatest Shade. These may also be propagated by Seeds or Off-sets, from the old Roots as the former. Most of these Plants are preserved in Pots in the Gardens of the Curious, but they will endure the Cold of our Winters in the open Air very well, and may be rendred ornamental by planting them under Trees in Wilderness Quarters, where they will fill up and cover the Ground, and may be disposed so as to make an agreeable Variety. These Plants require

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a Soil rather moist than dry; and if it be tolerably light, they will thrive much better, than in a very strong Soil.

The eleventh, twelfth, thirteenth and fourteenth Sorts, are Natives of the warmer Parts of *America*, so are more tender than either of the former. These Sorts were discovered at *Campechy* by Mr. *Robert Millar* Surgeon, who sent Samples of them to *England*; the Root of the twelfth Sort is the *Zarza Parilla*, which is directed by the College of Physicians to be used in Medicine.

These Sorts are propagated by Seeds or Off-sets, in the same Manner as those before-mentioned, but these must be preserved in Pots, and sheltered in Winter, otherwise they will not live in this Country. As these Plants rarely produce Seeds in *England*, so they are commonly increased by parting of their Roots; the best Time for doing of this, is in *March*, just before they send forth new Shoots from their Roots; for altho' the old Shoots abide and retain their Leaves throughout the Year, yet there are every Spring new Shoots sent forth from their Roots, which come up, like the small Shoots of *Asparagus*, with a naked Stem, but afterwards they send forth side Branches, which are beset with Leaves. Some of these Sorts multiply greatly by their creeping Roots, which will extend to a great Distance, provided they are not confined; but when they extend their Roots very far, they seldom produce very strong Shoots, nor do they make so good an Appearance, as when they grow close and thick.

When the Seeds of these Plants are obtained from abroad, they should be sown in Pots filled with fresh light Earth, and plunged into a moderate Hot-bed, observing to water the Earth frequently to keep it moist, because the Seeds being hard, will not vegetate without a considerable Share of Moisture, and many times remain in the Ground a whole Year, before they grow; so that if the Plants do not come up the first Season, the Pots should be kept clean from Weeds all the Summer, and in Winter they should be sheltered from Frost under a common Frame; the following Spring they must be again plunged into the Hot-bed, which will bring the Plants up very soon. When the Plants are come up, they must be constantly kept clear from Weeds, and frequently watered in warm Weather, and toward the End of *May*, they should be inured to the open Air by degrees, and in *June* they may be removed out of the Bed, and placed abroad in a sheltered Situation, where they should remain till the Frost comes on in Autumn, when they must be removed into shelter. These Plants should remain untransplanted in the Seed-pots, till the following Spring, when they should be turned out of the Pots, and carefully separated, the tender Sorts should be planted in Pots filled with fresh Earth; and if they are plunged into a very temperate Hot-bed, it will cause them to take new Root very soon, and greatly strengthen the Plants. But the hardy Kinds

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may be planted abroad under Trees, where (if they are kept clear from Weeds, until they have obtained sufficient Strength to overbear the Weeds) they will make an agreeable Variety, amongst other hardy Wood Plants.

The fifteenth, sixteenth and seventeenth Sorts, die to the Root every Year, and rise in the Spring; the fifteenth Sort is a very humble Plant, seldom rising above four Inches high; this increases by its creeping Root, for it rarely produces Seeds in this Country. It is a very hardy Plant, and grows in Woods, but it is not a Native of England. I observed it growing plentifully in a Wood near the Hague, in a moist light sandy Soil; so that whoever would cultivate this Plant, should plant it in such Situations. The best Time to transplant this Plant, is in the Autumn, when the Leaves are decayed.

The sixteenth and seventeenth Sorts; are also propagated by parting of their Roots, which may be done either in the Autumn, soon after their Leaves decay, or in the Spring before they send forth new Shoots. These Plants usually grow between two and three Feet high, and have very much the Appearance of *Solomons-seal*, until they produce their Flowers. These Sorts are very hardy, so will grow in almost any Situation, but should have a fresh light Soil, inclining to Moisture.

SOLANOIDES, Bastard Nightshade.

The Characters are;

It hath a rose-shaped Flower, consisting of five Leaves, whose Pointal afterward becomes a roundish Fruit, having one hard Seed, which is covered with a thin Pulp, so as to have the Appearance of a Berry.

The Species are;

1. SOLANOIDES *Americana*, *Circea foliis canescentibus*. Tourn. American Solanoides, with hoary Inchanters Nightshade Leaves.

2. SOLANOIDES *Americana*, *Circea foliis glabris*. Tourn. American Solanoides, with smooth Inchanters Nightshade Leaves.

The first Sort was mentioned in the former Volume of the *Gardeners Dictionary*, under the Title of *Phytolacca*, but as Dr. Tournefort has established a new Genus in the *Memoirs of the Academy of Sciences* for these two Plants, so I have taken the Liberty to place them here under their proper Name.

These Plants are Natives of the warmer Parts of America, from whence their Seeds have been brought into Europe, and the Plants are now become pretty common in the Gardens of the Curious. They are propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be transplanted, each into a separate small Pot, filled with light fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun, until they have taken new Root, after which Time they must have a large Share of Air admitted to them in warm Weather, and they must be constantly watered; when the Plants have obtained Strength,

they should be inured to bear the open Air by degrees, and in June they should be shifted into larger Pots, and removed either into the Stove, or an airy Glass-case, where they may have a large Share of Air in warm Weather, and if they are duly watered, they will thrive and produce Flowers in July, and their Fruit will ripen in September; but there will be a Succession of Flowers and Fruit all the Winter, provided the Plants are preserved in a moderate Temperature of Heat; so that the Fruit of these Plants afford an agreeable Variety in the Stove in Winter, for being of a bright red Colour, and growing in long Bunches, they make a fine Appearance. These Plants will abide several Years, and produce plenty of Flowers and Fruit, but they should constantly remain in Shelter, for if they are exposed in Summer, they will lose their large Leaves, and appear stunted, nor will the Fruit continue on the Plants; so that the best way is, to let them remain always in the Stove, giving them a large Share of Air in Summer, which will keep them in Vigour, and render them beautiful.

The Fruit of these Plants afford a fine red Colour, when bruised, but it soon fades on Paper, which renders it worth little. If a Quantity of these Fruit is squeez'd into a Glass of fair Water, so as to colour the Water, of a deep Red, and a Stem of Flowers of the *Tuberose* put into the Glass, it will in one Night imbibe so much of the Liquor as to variegate the Flowers with a rose Colour.

SOLANUM, Nightshade.

To this Article must be added;

1. SOLANUM *Americanum spinosum herbaceum, Acanthi folio, flore amplo cœruleo*. Houst. Prickly herbaceous American Nightshade, with a Bears-breech Leaf, and a large blue Flower.

2. SOLANUM *Americanum spinosissimum, herbaceum Anguriae folio, flore luteo*. Houst. The most prickly American Nightshade, with a Water-melon Leaf, and a yellow Flower.

3. SOLANUM *Americanum frutescens, spinosum, Quercus folio, baccis rubris*. Houst. Shrubby and prickly American Nightshade, with an Oak Leaf, and red Berries.

4. SOLANUM *Americanum bacciferum, caule & foliis tomento incanis, spinosis flore luteo, fructu croceo*. Sloan. Cat. Berry-bearing American Nightshade, with hoary Stalks and Leaves, a yellow Flower, and Saffron-coloured Fruit.

5. SOLANUM *Americanum fruticosum, bacciferum spinosum, flore cœruleo*. Sloan. Shrubby Berry-bearing American Nightshade, with a blue Flower.

6. SOLANUM *Americanum, frutescens & spinosum, flore magno albo*. Houst. Prickly and shrubby American Nightshade, with a large white Flower.

7. SOLANUM *Americanum, scandens, & frutescens, flore magno cœruleo, fructu rubro*. Houst. Shrubby climbing American Nightshade, with a large blue Flower, and a red Fruit.

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8. *SOLANUM Americanum frutescens, non spinosum, Lauri folio, flore racemoso cœruleo.* Houst. Smooth shrubby American Nightshade, with a Bay-leaf and blue Flowers, growing in Clusters.

9. *SOLANUM Americanum, frutescens & spinosum, foliis infra tomentosis, flore magno cœruleo.* Houst. Shrubby and prickly American Nightshade, with Leaves which are hoary underneath, and a large blue Flower.

10. *SOLANUM Americanum, arborescens, Verbasci folio, fructu flavescente majori.* Plum. Tree-like American Nightshade, with a Mullein Leaf, and a larger yellow Fruit.

11. *SOLANUM Bonariense arborescens, Papas floribus;* Hort. Elth. Tree-like Nightshade of Beunos Ayres, with Flowers like the Papaw.

12. *SOLANUM Babamense, arborescens, folio sinuato.* Hort. Elth. Tree-like Nightshade from the Babama Islands, with a sinuated Leaf.

13. *SOLANUM lignosum Africanum, semper-virens Laurinis foliis.* H. Amst. Woody evergreen African Nightshade, with Bay Leaves.

14. *SOLANUM Americanum scandens, foliis tomentosis.* Plum. Climbing American Nightshade, with woolly Leaves.

15. *SOLANUM Americanum scandens, aculeatum, Hyoscyami folio, flore intus albo extus purpureo.* Plum. Climbing prickly American Nightshade, with a Henbane-leaf, and a Flower white within, and purple on the Outside.

16. *SOLANUM Americanum fruticosum, Persicæ foliis aculeatum.* Plum. Shrubby and prickly American Nightshade, with Peach-Leaves.

17. *SOLANUM Dulcamarum Africanum, foliis crassis hirsutis.* Hort. Elth. Climbing African Nightshade, with hairy thick Leaves.

18. *SOLANUM Americanum arborescens, non spinosum, flore parvo rubente, fructu aureo.* Houst. Smooth American Tree-like Nightshade, with a small redish Flower and a Gold-coloured Fruit.

19. *SOLANUM Americanum arborescens, non spinosum, Lauri folio, aspero, floribus umbellatis albis.* Houst. Smooth Tree-like American Nightshade, with a rough Bay-leaf, and white Flowers growing in Umbels.

The first, second, third, sixth, seventh, ninth, eighteenth and nineteenth Sorts, were discovered by the late Dr. Houstoun, near La Vera Cruz, in America, from whence he sent their Seeds to England, many of which have succeeded in several curious Gardens, where the Plants are now growing.

The two first Sorts are annual Plants, so, rarely produce ripe Seeds in England; but the others are abiding Plants, which flower every year, and sometimes they perfect their Fruit in this Country.

These being Natives of a warm Country, must be raised on a Hot-bed early in the Spring, and when the Plants are fit to transplant, they must be each planted in a separate small Pot filled with fresh rich Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun until they have taken new Root; after which Time, they

should have a large Share of fresh Air admitted to them in warm Weather, and they must be plentifully watered. Toward the latter end of June, it will be proper to harden the Plants to endure the open Air, and soon after they should be removed into the Stove, where they must have as much free Air as possible in warm Weather; but as the Cold approaches in Autumn, they must be carefully protected therefrom, and in Winter they should be kept in a moderate Temperature of Warmth, otherwise they will not live in this Country.

Some of these Sorts will bear to be exposed in the open Air, in the Heat of Summer, provided they are placed in a warm Situation, but if the Season should prove cold, they will not thrive abroad, so it will be the better Method to let them remain in the Stove, and open the Glasses in Front, and at the Top of the Stove every Day, to admit as much Air as possible in hot Weather, with which Management they will thrive much better than in the open Air.

The fourth and fifth Sorts were discovered by Sir Hans Sloane in Jamaica, where they grow in plenty. The Seeds of these were also sent to England by the late Dr. William Houstoun.

The eighth Sort was discovered by the late Dr. William Houstoun, at Campechy, where it hath since been found in great plenty by Mr. Robert Millar a Surgeon, who sent the Seeds to England.

The tenth, fourteenth, and fifteenth Sorts, were discovered by Father Plumier in some of the French Settlements in the West Indies, and have since been found by Mr. Robert Millar, near Carthage in America, from whence he sent their Seeds.

The eleventh Sort was sent from Beunos Ayres, and the twelfth Sort is a Native of the Babama Islands.

All these being Natives of warm Countries, must be treated in the same Manner, as hath been directed for the former Sorts, otherwise they will not thrive in England.

The thirteenth, and seventeenth Sorts are Natives of the Cape of Good Hope, so are less tender than any of the other Kinds. These must be preserved in Pots, and placed in a good Green-house in Winter, where they should have a large Share of free Air in mild Weather, but must be secured against Frost, during the Winter Season; these Plants will require to be frequently refreshed with Water, but in cold Weather it must be given to them in moderate Quantities; and in Summer the Plants should be placed in the open Air, in a warm sheltered Situation, during which Season, they will require a more plentiful Supply of Water in dry Weather, for they are thirsty Plants, as are all of this Tribe.

The climbing Sorts of Nightshade may be propagated by Cuttings, which should be taken off in May, and those of the tender Kinds should be planted in Pots filled with fresh Earth, and plunged into a Hot-bed of Tanners-bark, where they should be carefully screened from the Heat of the Sun every Day, until they have taken Root; after which Time they may be treated

treated in the same Manner, as those Plants which come from Seeds. But the seventeenth Sort, which is more hardy, will not require so much Care; for if the Cuttings of this Kind are planted in a shady Border, they will take Root, and may be afterwards taken up and potted, and placed in a warm Situation in the open Air till *October*, when they must be removed into the Green-house for the Winter Season.

These Plants, when they thrive well, and produce plenty of Fruit, make an agreeable Variety amongst other exotick Plants, in the Stove, and Green-house, especially in the Winter Season, at which time they commonly have plenty of Fruit, which make a pretty Appearance, when there are not many other Plants in Beauty. And some of these Sorts, whose Flowers are large and of beautiful Colours, make a fine Appearance, and are worthy of a Place in the Stove, tho' they do not constantly produce Fruit in this Climate, especially the first Sort, whose Flowers are very large and of a fine blue Colour; and the eighth Sort, whose Flowers, tho' small, yet being produced in long Clusters, and being of a fine blue Colour, make a fine Appearance; and these do frequently flower in the Winter Season.

SOLDANELLA, Soldanel.

The Characters are;

It hath a Bell-shaped Flower, consisting of one Leaf, which is for the most part fringed; the Pointal, which arises from the lower Part of the Empalement, afterwards becomes a Fruit of a cylindrical Figure, opening at the Top, and full of Seeds, which adhere to a Placenta.

The Species are;

1. SOLDANELLA *Alpina rotundifolia*. C. B. P. Round-leav'd Soldanel of the Alps.

2. SOLDANELLA *Alpina rotundifolia, flore niveo*. C. B. P. Round-leav'd Soldanel of the Alps, with a Snow-white Flower.

3. SOLDANELLA *Alpina, folio minus rotundo*. C. B. P. Soldanel of the Alps, with a Leaf less round.

These Plants grow on the Alps, and several other mountainous Places of Italy, Germany, and Hungary, from whence the Plants have been obtained by some curious Persons, who preserve them in their Gardens for the sake of Variety. They are Plants of humble Growth, seldom rising above six or eight Inches high; their round Leaves grow close to the Ground, from between which the Flower Stems arise; each of which have four or five Flowers, which in the first Sort are of a fine blue Colour, but the second of a Snow-white, which hang down and are shaped like Bells. They flower the latter End of April, or the Beginning of May, and their Seeds are ripe in July.

The best Method to propagate these Plants, is, by parting of their Roots, because their Seeds do not succeed unless they are perfectly ripe and well nourished, and this rarely happens in England; nor do the Seeds, which are brought from abroad succeed, for they seldom grow, unless they are sown soon after they are ripe.

The Time for transplanting and parting of these Roots is in September, that they may have Time to make good Roots before Winter; for if they are removed in the Spring, they never flower very strong, and if the Season should prove dry, the Plants will decay, unless they are constantly supplied with Water.

The Soil in which these Plants thrive best, is a strong cool Loam, and they must have a shady Situation, for if they are exposed to the Sun, they will not live, nor will they thrive in a warm light Soil. In dry Weather these Plants should be frequently watered, which will cause them to flower strongly, and make a good Increase.

If the Seeds ripen in England, and any Person is desirous to propagate the Plants that Way, they should be sown in Boxes or Pots, filled with fresh loamy Earth, soon after they are ripe; and the Boxes must be placed in a shady Situation, and frequently watered in dry Weather. The Plants will sometimes appear the same Autumn the Seeds are sown, but more frequently they do not come up till the following Spring, so that the Earth must not be disturbed, nor Weeds permitted to grow in the Boxes. When the Plants come up, they must be duly watered in dry Weather, and constantly placed in a shady Situation. The following Autumn, the Plants should be taken out of the Boxes, and planted in a shady Border, about six or eight Inches asunder, where they may remain to flower; or they may be intermixed with other low Alpine Plants in north Borders, where they will make an agreeable Variety.

SORBUS, The Service Tree.

To this Article must be added;

SORBUS *sativa fructu ovato, medio rubente*. Hort. Cath. The manured Service, with an oval Fruit, which is red within.

2. SORBUS *sativa, magno fructu turbinato, pallide rubente*. Inst. R. H. The manured Service, with a large turbinated Fruit of a pale red Colour.

3. SORBUS *sativa, magno fructu nonnihil turbinato, rubro*. Inst. R. H. The manured Service, with a large red Fruit not turbinated.

4. SORBUS *sativa, fructu turbinato, omnium minimo*. Inst. R. H. The manured Service, with the least Fruit.

5. SORBUS *Orientalis, Fraxini folio*. Tourn. Cor. Eastern Service, with an Ash-leaf.

6. SORBUS *Orientalis, fructu magno, compresso & flavescente*. Tourn. Cor. Eastern Service, with a large, flat, yellowish Fruit.

The four Sorts first mentioned are very common in the Italian Gardens, and of late Years they have been brought into England, by the Persons who bring over Orange-trees, &c. so that in a few Years, they may be common in England. But the great Difficulty is in keeping of the Sorts; because when these Trees are propagated by Seed, they vary as much in their Kinds as do Apples and Pears. And it is very difficult to propagate them by grafting or budding, for they seldom succeed when grafted on Pears, Apples, or Medlars, and

and it is not easy to raise Stocks of their own Kind, for the Fruit do not always ripen in this Country.

The fifth and sixth Sorts were discovered by Dr. Tournefort in the *Levant*, but at present they are not in the *English* Gardens. These Sorts may be all propagated by Seeds, after the Manner directed in the former Volume of the *Dictionary*. The best Way to procure good Seeds of these Plants, is to have the Fruit, when duly ripened abroad, put up in Boxes of Sand and sent over, in which Method they may be brought over very well, for if the Fruit should rot, the Seeds will remain good by being preserved in Sand.

SPARTIUM, Broom.

To this Article must be added ;

1. SPARTIUM *Oriente*, *humile fructu villosa & rostrato*. Tourn. Cor. Dwarf Eastern-broom with a hairy beaked Fruit.

2. SPARTIUM *Oriente*, *siliqua compressa, glabra & annulata*. Tourn. Cor. Eastern-broom, with a flat, smooth, circular Pod.

3. SPARTIUM *Americanum*, *portulacæ foliis aculeatum*, *Ebeni materie*. Plum. Prickly American-broom, with Purslain-leaves, whose Wood is taken for Ebony.

4. SPARTIUM *Americanum scandens*, *Citri foliis, floribus albis, ad nodos confertim nascentibus*. Plum. Climbing American-broom, with Citron-leaves and white Flowers, which are produced in Bunches at the Joints.

The two first Sorts were discovered by Dr. Tournefort in the *Levant*, from whence he sent the Seeds to the *Royal Garden* at *Paris*. These Plants are as hardy as the common Sorts mentioned in the former Volume of the *Gardeners Dictionary*. They are propagated by Seeds, which should be sown in the Spring on a moderate Hot-bed, in the same Manner as hath been directed in the former Volume for the two common Sorts, and the Plants must also be managed in the same Manner.

The third Sort is very common in *Jamaica*, and several other Places in the *West-Indies*, where the Wood is cut and sent to *England*, under the Title of *Ebony*, tho' it is not the true black *Ebony*, which is a Native of the eastern Country, and is a Plant of a very different Genius. The Wood of this *American-Ebony*, is of a fine greenish-brown Colour, and polishes very well, so is much coveted by the Instrument-makers, and is used for several Purposes, being of a very hard, durable Nature.

The fourth Sort is pretty common in the *Spanish West-Indies*, from whence I have received the Seeds, which were collected by Mr. Robert Millar. This is a climbing Plant, which will twist round whatever Trees grow near it, and will rise to a great Height. The Leaves of this Plant are thick and strong, somewhat resembling those of the Citron-tree, and continuing green the whole Year, they make an agreeable Variety in the Stove, amongst other tender exotic Plants.

These Plants are propagated by Seeds, which must be procured from the Countries of their natural Growth, for they do not produce Seeds

in this Climate; these Seeds should be sown in Pots filled with light fresh Earth, early in the Spring, and plunged into a good Hot-bed of Tanners-bark, where they should be frequently refreshed with Water, and if the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats to keep the Bed in a good Temperature of Warmth: in the Middle of the Day, when the Sun shines warm, the Glasses should be raised to let the Steam of the Bed pass off, as also to admit fresh Air. In about a Month after the Seeds are sown, the Plants will appear, when they must be carefully treated (being very tender while young); they must have fresh Air admitted to them every Day, when the Weather is warm, and should be frequently refreshed with Water, when the Earth in the Pots appears dry. In about five or six Weeks after the Plants appear they will be fit to transplant, when they should be carefully shaken out of the Pots, and separated, planting each into a small Pot filled with light rich Earth, and then plunge them into the Hot-bed again, being careful to shade them from the Sun every Day, until they have taken new Root; after which Time they must be treated in the same Manner as other very tender exotic Plants, by giving them Air every Day in warm Weather, and watering them every other Day gently, and when the Nights are cold to cover the Glasses. In this Hot-bed the Plants may remain till Autumn, when they must be removed into the Stove, and plunged into the Bark-bed: those of them whose Roots have filled the Pots, should be carefully shifted into Pots one Size larger, before they are plunged, but as these Plants are not of quick Growth while young, so they do not require to be often shifted out of the Pots. During the Winter Season these Plants must be kept very warm, (especially the first Year) and they must be frequently refreshed with Water, but in cold Weather it must be given to them in small Quantities, and if their Leaves should contract Filth, they must be washed with a Sponge to clean them, otherwise the Plants will not thrive. As these Plants are very tender, so they will not live in the open Air in this Country, even in the warmest Part of the Year, therefore they must be constantly kept in the Stove, and should be plunged in the Bark-bed, observing in the Summer Season, when the Weather is warm, to admit a large Share of fresh Air to the Plants, but in Winter they must be kept very warm. With this Management, the Plants will thrive very well, and in a few Years will produce their Flowers, when they will make a pretty Appearance in the Stove.

SPERGULA, Spurrey.

The Characters are ;

It hath a Rose-shaped Flower, consisting of five Leaves, which are included in a five-leav'd Empalement; in the Centre of the Flower, arises the Pointal, which afterward becomes a roundish membranaceous Fruit, which opens in three Parts, and is filled with small Seeds, which in some Species have a Border round them.

The Species are ;

1. SPERGULA. *J. B.* The common Spurrey.
2. SPERGULA *marina nostras. J. B.* The Sea Spurrey.
3. SPERGULA *purpurea. J. B.* Purple Spurrey.
4. SPERGULA *minima, seminibus marginatis.* The least Spurrey, with bordered Seeds.

These Plants grow wild in several Parts of England, the second Sort is found on the Sea Shores, where the Salt-water usually flows, but the other Sorts grow on sandy Commons, and amongst Corn in great Plenty.

The first Sort is cultivated in Holland, and Flanders, for feeding their Cattle; the usual Time of sowing the Seed is in August, that the Plants may have Time to get Strength before the Winter's Cold. The Use that is made of this Grass, is to feed Sheep and other Cattle in Winter, when the common Grass hath done growing. This Plant seldom rises above six Inches high, so will not afford a very great Quantity of Food, but as it will grow on the poorest Sand, so it may be cultivated in many Places to good Advantage, where no other Grass will thrive so well; and by feeding it off the Ground, the Dung of the Cattle will improve the Land. This Pasture, is affirmed, will make excellent Butter, and the Mutton fed on it, is said to be well tasted, so is by many preferred to that fed on Turneps. Hens will greedily eat this Herb, and it makes them lay more Eggs.

This Plant being annual, must be sown every Year, and whoever is willing to save the Seeds, should sow it in April, that the Plants may flower the Beginning of July, and the Seeds will ripen in August, when it must be cut before the Heads are quite brown, otherwise the Seeds will soon scatter.

The Seeds being very small, about twelve Pounds, will be sufficient to sow an Acre of Land. The Ground should be well dressed before the Seeds are sown, for if the larger Clods are not broken, there will be an uneven Crop of Grass; People in the low Country sow this Seed, after a Crop of Corn is taken off the Land. The fourth Sort is now much cultivated in Flanders, tho' it is a much lower Plant than the common Sort, but they esteem it a much better Grass. The Seeds of this Kind are smaller and flatter than those of the common Sort, and have a white Border round each.

SPHONDYLIIUM, Cow-parsnep.

The Characters are ;

It is an umbelliferous Plant, with a Rose-shaped Flower, consisting of five uneven Heart-shap'd Leaves, which are placed circularly, and rest on the Empalement; which afterward becomes a Fruit, composed of two large Seeds, which are flat and oval, having a Point that wants a border within, channelled, and generally casting off their Cover, and marked with dark Spots, on the Part where they adhere to each other.

The Species are ;

1. SPHONDYLIIUM *vulgare hirsutum. C. B. P.* Common hairy Cow-parsnep.

2. SPHONDYLIIUM *vulgare hirsutum, floribus purpureis. C. B. P.* Common hairy Cow-parsnep, with purple Flowers.

3. SPHONDYLIIUM *majus, five panax Herculeum quibusdam. J. B.* Greater Cow-parsnep, or Hercules's All-heal.

4. SPHONDYLIIUM *crispum. J. B.* Curled Cow-parsnep.

5. SPHONDYLIIUM *hirsutum, foliis angustioribus. C. B. P.* Hairy Cow-parsnep, with narrower Leaves.

6. SPHONDYLIIUM *foliis angustioribus, atro purpureis. H. R. Monsp.* Cow-parsnep, with narrower dark purple Leaves.

7. SPHONDYLIIUM *Alpinum parvum. C. B. P.* Small Cow-Parsnep of the Alps.

8. SPHONDYLIIUM *Alpinum glabrum. C. B. P.* Smooth Cow-parsnep of the Alps.

9. SPHONDYLIIUM *Oriente maximum. Tourn. Cor.* Greatest Eastern Cow-parsnep.

10. SPHONDYLIIUM *Oriente amplissimo folio, caule brevi. Tourn. Cor.* Eastern Cow-parsnep, with a very large Leaf, and a short Stalk.

11. SPHONDYLIIUM *Oriente, longissimo & angustissimo folio. Tourn. Cor.* Eastern Cow-parsnep, with a very long, and very narrow Leaf.

12. SPHONDYLIIUM *Oriente, angustifolium glabrum, anisum olens. Tourn. Cor.* Smooth narrow-leav'd Eastern Cow-parsnep, smelling like Anise.

13. SPHONDYLIIUM *Oriente, foliis ammi perennis. Tourn. Cor.* Eastern Cow-parsnep, with perennial Bishops-weed Leaves.

14. SPHONDYLIIUM *Oriente, humilium, foliis absinthii. Tourn. Cor.* Dwarf Eastern Cow-parsnep, with Wormwood Leaves.

15. SPHONDYLIIUM *Oriente, Dauci vulgaris folio, asphodeli radice. Tourn. Cor.* Eastern Cow-parsnep, with a common Carrot-leaf, and an Asphodel-root.

The first and fifth Sorts grow wild in England; the first is very common on the Sides of Ditches, and the Borders of Fields in moist Land every where. The other Sorts are not Natives of this Country, but are many of them preserved in Botanic Gardens, for the sake of Variety.

They are all very hardy Plants, which may be propagated by Seeds, the best Time for sowing them, is in Autumn, soon after the Seeds are ripe. They should be sown where the Plants are designed to remain, because they send forth tap Roots, somewhat like those of the Parsnep, so do not thrive so well when transplanted, as if suffered to remain where they are sown. The Plants grow very large, so the Seeds should be sown in Drills, at two Feet and a half distance; and in the Spring, when the Plants appear, they should be thinned, so as to leave them at least eighteen Inches asunder in the Rows; after which they will require no farther Care, but to keep them clear from Weeds, and when the Plants have obtained Strength, they will not easily be injured by Weeds, for they will overbear them, and prevent their getting up. The second Year these Plants will produce Flowers and Seeds, and their Roots will abide many Years, and produce Seeds every Year, which if permitted to

to scatter, will fill the neighbouring Ground, and become troublesome Weeds.

The third Sort (which is very common in Germany) hath been by some of the German Writers, taken for the *Acanthus* or Bears-breech, and the same Qualities applied to it.

The Name of Cow-Parsnep, was given to this Plant, from the Cows eating of it, but they do not chuse to eat the Leaves of this Plant, if they can get any other Food, as may be observed in the Fields where the Plant is in great Plenty; for the Cows will eat the Grass very close about these Plants, tho' they are rarely found to be touched by them, unless when the Grass is burnt up. Rabbits will eat the Leaves of this Plant, and seem fond of it.

SPIRÆA.

To this Article must be added;

SPIRÆA Hispanica, Hyperici folio crenato.
Inst. R. H. Spanish Spiræ, with a notched St. Johns-wort Leaf, commonly called *Hypericum frutex*, with a notched Leaf.

This Shrub is equally hardy with the common Sort, and rises to the same Height, so may be disposed in the same manner in Plantations of flowering Shrubs. It may be propagated by laying down the Branches, or by Suckers from the Root, in the same Manner as hath been directed for the common Sort, in the former Volume of the Dictionary.

STAPHYLODENDRON, Bladder-nut.

To this Article must be added;

1. *STAPHYLODENDRON Americanum, foliis lauri angustis.* Plum. Cat. American Bladder-nut, with narrow Bay-leaves.

2. *STAPHYLODENDRON Americanum, trifoliatum, foliis incis.* Houst. Three leav'd American Bladder-nut, with cut Leaves.

The first Sort is pretty common in *Jamaica*, *Barbados*, and some other Places in the warm Parts of *America*, where it usually rises to the Height of ten or twelve Feet, and produces it's Branches regularly, which are beset with Leaves, shaped in some measure like those of the Bay-tree, but are narrower and full of Veins, and of a lighter green Colour, the Flowers are small, and of an herbaceous Colour, which are succeeded by flat Bladders, having a Border round them, and enclosing two or three roundish Seeds.

It may be propagated by Seed, which should be sown early in the Spring, on a moderate Hot-bed, and when the Plants are come up, they should be frequently refreshed with Water, and kept clear from Weeds, until they have obtained Strength enough to transplant, when they should be carefully taken up, and each planted into a separate small Pot filled with fresh light Earth, and then plunged into a Hot-bed of Tanners-bark, where they must be carefully shaded until they have taken new Root, after which Time they should have free Air admitted to them every Day in warm Weather, by raising the Glasses of the Hot-bed, and they must be constantly watered every other Day, during the summer Season. If the Plants thrive they will fill the small Pots with their Roots by the Beginning of July,

when they must be shaken out of the Pots, and their Roots trimmed, and then put into Pots a little larger, which should be filled with fresh light Earth, and then plunged again into the Hot bed, to facilitate their making new Roots; but after this, they should have a larger Share of Air to harden them before Winter. At *Michaelmas*, when the Nights begin to be cold, the Plants should be removed into the Stove, where, during the Winter Season, they should be kept in a moderate Temperature of Warmth, and must be frequently refreshed with Water, but it should be given to them in small Quantities when the Weather is cold. The following Summer the Plants should be by Degrees inured to bear a large Share of Air, but while they are young, they should not be intirely exposed abroad, tho' when the Plants are become woody, they will bear to be set abroad every Summer, in a warm sheltered Situation, and in Winter will live in a good Greenhouse, without any artificial Heat. This Plant doth frequently produce Flowers in this Country, and in warm Seasons, will sometimes perfect Seeds. It continues green throughout the Year, so will make an agreeable Variety in the Conservatory in the Winter Season, for which it is chiefly preserved.

The second Sort was discovered by the late Dr. *William Houstoun*, at *Campechy*; this Sort hath weak flexible Branches, so doth not make a regular Stem like the former, but forms it's self into a rude Bush. The Flowers of this Kind are produced in Bunches, at the Extremity of the Branches, which are succeeded by compressed Bladders, very like those of the former Sort.

This Kind may be propagated by Seeds, which must be sown in the same Manner as hath been directed for the former Sort, and the Plants must be treated much after the same Way; but as these are somewhat tenderer than those, they should not be exposed abroad in Summer, nor will they live thro' the Winter, unless they are preserved in a moderate Degree of Warmth.

STOVE.

Since the Publication of the former Volume of the Dictionary, there hath been a great Number of Stoves built in *England*; and these have been projected in different Manners, according to the several Plants which they were design'd to contain. So that there has been very great Improvements made in these Contrivances, but especially in the Stoves for the *Ananas* or Pine-apple, which Fruit, is now pretty commonly cultivated in the *English* Gardens, and the Method of cultivating them more generally known, so that the Expence of maintaining them is greatly diminished. But notwithstanding what has been by some affirmed, viz. that they may be propagated in Hot-beds without any Stoves, yet, from a Number of Trials, I am convinced, that is a more expensive Method, and attended with a much greater Uncertainty, than when they are kept in Stoves; for in those Hot-beds, when foggy cloudy Weather happens, which is too frequent in the Winter Season in this Country, there must

must be an extraordinary Care taken to prevent the Damp (which will at such Times be very great in the Beds) from rotting the Plants; and in very cold Weather, these Beds must be lined round the Sides with hot Dung, to keep a Warmth in the Bed, and this must be repeated three or four Times in a Winter, according to the Cold of the Season, without which the Plants will not thrive. So that the Trouble of doing this is very great, and where Dung is scarce, is also expensive, and in this Method there is no Certainty of having any Quantity of Fruit: for I have observed where the Plants have been thus managed, few of them have produced Fruit, and some Years they have intirely miscarried, whereas those in Stoves do seldom fail, when the Plants are of a proper Size for bearing. And after the first Expence of building the Stove, the Charge is not very great to maintain the Plants, for a small Quantity of Fuel will be sufficient to warm a Stove, which is capable of containing fourscore or a hundred Plants, and a less Quantity of Tan will be required for them, than when they are kept in Frames. In a Stove of twenty-four Feet long, and about eight Feet broad (exclusive of the Flues) may be placed about one hundred Plants to bear Fruit, (provided they are planted in the Tan, which is found to be the best Method, and of which I shall give a particular Account hereafter). This Stove may be kept warm during the Winter Season, with two Chauthern and a half, or at most three Chauthern of Coals, or with any other Sort of Fuel in proportion; but where Coal can be had at an easy Expence, it is much the best Fuel, because the Smoak of this will keep warm much longer than of any other Fuel, so will heat the Flues much more, and it will make much less Soot, than Turf or any such Fuel, which is an Advantage, because the Flues will not require to be so often cleaned.

I shall now proceed to give a Description of two Sorts of Stoves, which have of late been invented for the *Ananas*, in both which they are found to succeed equally. The first of these Stoves, has but one Slope of Glasses, from the Top to the Plate, which is raised about a Foot above the Level of the Ground (provided the Soil is dry, otherwise it must be advanced higher, so as that the Bark-pit may not descend so low as to be ever troubled with Water, which would cool the Tan and spoil the Bed). The other Sort of Stove, has upright Glasses in Front, about four Feet high, and from the upper Part of these, are sloping Glasses, which run up to the Top. The Design of these upright Glasses in Front, is to admit of a small Walk between the Bark-pit and the Glasses, for the more convenient passing round the Plants to water them, &c. which in other Stoves cannot be done, so that the Glasses must be opened to come at the front Row of Plants, whenever they want to have any Thing done to them: tho' as to the watering of the Plants, that may be very well performed, from the Walk on the back of the Tan-bed, with a long spouted watering Pot, so that there will be no Necessity of opening the Glasses, but on particular Occasions. These small Stoves,

with one slope of Glasses, are contrived to save Expence, and where Persons are confined for Room. And as they contain a much less Quantity of Air than the other Stoves, so a smaller Quantity of Fuel will keep them warm; but the other being the more commodious, is by many People preferred to these. However, I shall give as plain Directions as possible, for the building both these Kinds of Stoves, which with the annexed Plates, will be sufficient Instructions for any Person, who is the least skilled in Buildings, to make either of the Stoves.

The first Plate contains a Plan of the small Stove, with one Slope of Glasses, with a Section of the Flues, a Plan of the Tan-bed, and of the Furnace, with the sloping Glasses. The Length from out-to-out of this Stove, is twenty four Feet; and the Width eleven Feet. The Walls in Front, and at each End are one Brick and a half in Thickness, and the back Wall must be two Bricks thick, in order to throw the Heat into the House, because to this Wall the Flues are built. The Pit, which contains the Tan, is the whole Length of the Building, and six Feet wide, but the Depth need not be more than two Feet and a half, which will hold a sufficient Quantity of Tan, to contain a moderate Warmth so long as is necessary. This Pit should be brick'd at bottom, to prevent the Earth mixing with the Tan; the Wall in Front of the Stove, as also those at each End, to encompass this Pit three Ways, so there must be a nine Inch Wall carried up on the Back-side, to which the Wall which sustains the Flues, will almost join; for in carrying up the back Wall of the Stove, it will be proper to make the Foundation so broad, as to include the Width of the Flues (which must be two Feet nine Inches) that the Work may settle equally. From this Foundation, to the Side of the Bark-pit, there will be two Feet, including the nine Inch Wall of the Pit, so that the other fifteen Inches, may be filled up with Rubbish, to save the Expence of Bricks, since it is only to support the Pavement of the Walk. In carrying up the back Wall of the Stove, the Flues should also be carried up with it, that the Covering of each Flue may be joined into the solid Brick-work of the Wall. The lower Part of the bottom Flue, should be level with the Pavement of the Walk, that the Heat may be intirely above Ground. The Depth of the first Flue should be two Feet, because in this the greatest Quantity of Soot will lodge, and the Width must be as much as a Foot-tile may reach to cover; which may be about ten Inches; for if the Tiles have an Inch on each Side bearing, it will be sufficient, since they are not to support any Weight; but where the Flues are covered with flat Stones, which will admit of their being made wider, it will be proper to allow them fifteen Inches wide, which give better Room to cleanse them. The Wall in Front of the Flues, within side of the House, should not be above four Inches thick, that the Smoak, in passing thro' the Flues, may send the Heat more easily into the Stove. The other three Flues should be eighteen Inches deep, and all of them the same Width of the lower one; which will be

be large enough for a Chimney Sweeper to go thro' them, to cleanse them of the Soot, whenever they are foul. These Flues turning four times (as in the annexed Plan) will rise almost to the Top of the Stove; for as the Use of these Stoves is to contain *Ananas*, which are low Plants, so if there is but Height enough for a Man to walk upright on the Walk at the Back-side of the House, between the Pit and the Flues, it will be sufficient; for the lower the Stoves are built, the less Quantity of Fuel will keep it warm in Winter; but as it will be necessary to build the Back-wall six Feet and a half high to contain the Flues, so by raising it one Foot higher, there will be upward of six Feet in Height, notwithstanding the Slope of the Front. The Flues should be well plaistered with Loam and Dung within-side, which should be laid as smooth as possible, that the Smoak may not be the least obstructed in its passing thro' them; and when they are carried quite up, the Whole should be plaistered on the Side within the Stove, with Lime and Hair, and covered closely with Hop-bags, or other coarse Cloth, after the Manner as Coppers are usually done, which will prevent the Smoak from getting thro' into the Stove, and fasten the whole Work together.

In the Front-slope, the Glasses need not be carried to the Top of the Building, but the upper Part may be boarded, and covered, either with Slates or Lead, about three Feet and a half below the Top, which will cover the Flues and the Walk; so that the Glasses, which must run up just under this Covering, will extend over the Bark-bed, and the Plants will enjoy the full Advantage of the Sun and Light.

On the Backside of the Stove, at one End, must be built a small Shed, in which the Furnace must be placed, which should be sunk so low, as that the Top of the Oven may be ten Inches, or a Foot below the first Flue, which will occasion a good Draught to the Smoak. This Oven need not be very large for these small Stoves, about sixteen Inches wide, and twenty Inches long within-side will be sufficient. To this Oven there must be an Iron Door, somewhat like those for Coppers, and under the Oven there must be an Ash-hole, to which there should also be another Door, that when the Fire is thoroughly lighted, may be shut to prevent the Fuel from burning away too fast. This Oven should be built with the best Materials, otherwise it will often want Repairing, which is what should be avoided as much as possible, for the Trouble of doing it is pretty great; beside the often pulling down of the Oven, will impair the other Brickwork into which it is joined.

At the other End of the Stove should be a Door, which should open outward, for the Convenience of getting into the Stove, which must be made of double Deal, and contrived to shut as close as possible, to prevent the Air from getting into the Stove to cool it. This Door is also of Use to open to give Air to the Plants in Summer, at such Times, when it may be improper to open any of the Glasses. For the better understanding of the whole Con-

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trivance, the annexed Plate it is hoped will be sufficient; so I shall proceed to describe the other Sort of Stove, with upright Glasses in Front.

The Stoves, which are built with upright Glasses in Front, are more convenient than the others, as they admit of a small Walk in the Front of the Bark-bed, so that the Plants may be easier watered, and whenever there is any Thing to be done to the Plants, it may be performed better, as there will be a Passage quite round the Tan-bed. The Length of these Stoves, may be in Proportion to the Number of Fruit desired; but they should not exceed forty Feet, unless there are two Ovens contrived for Fire to warm them; for one Fire place will not warm a greater Length of Stove, to such a Degree of Heat as is necessary to keep the *Ananas* in good Health: therefore, I have chosen to make the annexed Plan of this Length. The Width of this Stove is twelve Feet from out-to-out, the Bark-pit is seven Feet over, and the Walk between the Bark-bed and the Front-glasses, as also at the two Ends, is one Foot broad, which will afford sufficient Room to pass round the Bed, to water, or do what is necessary to the Plants; the Walk on the Back of the Stove, between the Bark-bed and the Flues, is two Feet broad, which will be commodious enough for any Purposes, since in these sort of Buildings, their Use is chiefly consulted, for when they are too wide, there requires more Fuel to warm them, and there will be a greater Quantity of Glass Work, which is not only an Expence in the first Building, but will be an annual Charge to keep in Repair.

The upright Glasses in the Front of the Stove, are five Feet high, and being raised at the Bottom, about six Inches above the Walk, will be high enough to admit a Person to pass round to water the Plants; for if these Glasses are taller, it will render it more difficult to reach the upper Glasses to draw them down to admit the Air to the Plants in hot Weather. The sloping Glasses which run up to the Top of the Stove, being near twelve Feet in Length, are divided into two Ranges, which will render them more handy to move, and they will be much stronger, than if they were only in one Range. From the upper Part of these Glasses there is a Penthouse, which slopes to the Back of the Stove, and projects so forward, as to cover the Flues and the back Walk of the Stove; so that the Glasses will reach as far as the Width of the Tan-bed, to admit Air and Sun to the Plants.

The Oven for this Stove should be two Feet square in the Clear, to contain a larger Quantity of Fuel than those of the small Stoves, because the Stove being larger, will require a greater Fire to warm it. The Contrivance of the Oven and the Flues is the same as in the small Stove, so need not be repeated here.

Where a Person is desirous to have a large Quantity of Fruit of the *Ananas* every Year, the best Way to effect it, will be to have one of each of these Stoves, the largest of them to fruit the Plants, which if made of the Dimension here described, will contain about

two hundred Plants when full grown; and in the small Stove, the young Plants may be brought on to supply the large Stove; which is a much surer and less troublesome Method, than to keep the young Plants under Frames without Fire in Winter, as is by some practised.

But those Persons who may think the Expence too great to build two Stoves, may contrive a Frame to raise the young Plants in, which if made of Brick-work, may have two Flues carried in the Back-wall above the Tan-bed, which may be heated in Winter with a small Quantity of Fuel; for as the Frame need not be more than three Feet high above the Tan-bed on the Backside, so the Quantity of Air contained in such a Frame may be warmed at a small Expence, and as the Glasses may be covered with Mats in cold Weather, so the Frost will not cool the Air so much as where the Glasses have no Covering. If these Frames are built on dry Ground; the Bark-pit may be sunk below the Surface of the Ground, which need not be more than two Feet and a half, and the Wall in Front must be about sixteen Inches above the Ground, but the Back-wall must be three Feet high, which will make a Declivity sufficient to carry off the Rain. Upon the Walls must be fixed a Plate of Timber, about six Inches thick, into which the Gutters on which the Glasses are to slide must be fixed, so that the Glasses will be raised on the Backside, about three Feet and a half above the Surface of the Bark-bed, and about twenty-two Inches in Front, where the smallest Plants should be plunged, and the largest Plants must be plunged backward, whereby they will fall in a regular Slope, proportionable to the Glasses, so that the Plants in every Part of the Bed may be nearly at an equal Distance from the Glasses.

At one End of this Frame must be the Oven for to make the Fire, which should be sunk intirely below the Surface of the Ground, that there may be a Draught for the Smoak; but this must be shedded over to keep out the Rain, and inclosed so as to keep out the Wind; for if the Fire is exposed to the open Air, it cannot be kept regular. Therefore the best Method is to carry up the Shed with Brick-work, nearly the Height of the Back-wall, which may be covered with Tiles, and have a small Door to it, just sufficient for a Man to enter to put on the Fuel. This Shed need not be above four Feet square, for the Oven should not be more than fourteen Inches square in the Clear, which will contain as much Fuel as is necessary to warm this Frame. But this Oven must be intirely built in the Shed, and a Cavity carried up from the Bottom, between the Oven and the Bark-bed, otherwise the Fire will dry the Tan, and it will be in great Danger of taking Fire, when the Bricks are thoroughly heated.

The Length of the Frame should not be more than twenty-four Feet, and the Width six Feet, which will hold a sufficient Number of young Plants to fill the large Stove, when they are fully grown, and one Fire-place will be sufficient to warm the Air contained herein. The

two Flues of this Frame must be carried one over the other, in the same Manner as in the Stove, the lower Part of the first Flue should be raised just above the Surface of the Bark-bed, to prevent the Heat from drying the Tan. This Flue should be eighteen Inches deep, and ten Inches in Width, and the upper Flue may be fourteen Inches deep, and of the same Width. But the better to inform the Reader, I have annexed a Plate of this Frame, by which it will be easily comprehended.

Where the Ground is wet, the Bark-pit must not be sunk below Ground, for if the Water should rise to the Tan in Winter, it will cool the Bed, and render it unfit to keep the Plants; therefore in such Situations the whole Pit must be raised above the Surface of the Ground, which will occasion the Back-wall to be five Feet and a half high, and the Front-wall three Feet ten Inches high, so that it will be more troublesome to water the Plants, as also to shift the Tan in these Frames, than in those which are low, which is an Advantage always to be taken, whenever the Situation and Soil will admit of it. For the lower the Beds are, the less they will be exposed to Weather, and the more handy will it be to manage the Plants therein.

The Bottom of the Bark-pit in this Frame should be paved with Bricks, or a Foundation of Rubbish laid at Bottom, which should be made level and pressed down hard, to prevent the Earth from mixing with the Tan, which it is very apt to do, where this is not observed; besides, if the Persons who take out the old Tan, when the Bed requires to be renewed, are not very careful, they will dig into the Ground, and loosen the Earth in the Foundation, so that there will always be an Equality therein.

The Stoves and Frame here described, are chiefly intended for the *Ananas*, or may be used for any other tender exotic Plants of low Growth; but whoever is willing to cultivate the larger Sorts of exotic Plants and Trees, must build Stoves much higher than either of these, otherwise the Plants cannot be contained therein; for the *Musa*, which is now pretty common in *England*, will rise in the Space of fourteen or fifteen Months, to the Height of twenty Feet or more, provided they are not cramp'd in their Roots; so that in order to see these Plants in Perfection, the Stoves should be at least twenty-five Feet high, and proportionable in Width.

The most magnificent Stoves which have yet been built in *Europe*, are those of the Rt. Hon. Lord *Petre*, at *Tborndon Hall* in *Essex*, some of which are upward of thirty Feet high, and above twenty Feet broad. The Bark-beds in these Stoves are twelve Feet broad, so that there is Room for large Plants to grow in the Borders, which are made in the Middle of these Beds; and a spacious Walk round the Bed. On the Backside of the Stove next to the Flues, is a broad Border, in which the several Sort of climbing Plants, which are Natives of the warmest Countries are planted, and an Espalier built to the Top of the House, for

for these to climb against, so that the Wall is intirely covered with Plants on the Inside of the House, which make a fine Appearance, because as these are not confined in their Roots, so they grow as luxuriantly as in their native Soil, and produce their Flowers and Fruit in great Plenty.

In the Building of these large Stoves, the same Method should be followed, as for the Stove in the second Plate, with no other Alteration but that of enlarging the Dimensions; which should be in this Proportion, *viz.* for a Stove of twenty-five Feet high, the upright Front Glasses should be twelve Feet high, which will allow a good Share of Room for tall Plants near the Front of the Stove, and from the upper Part of these Glasses, the two Ranges of Sloping Glasses are to run to the Top, which will allow a sufficient Declivity to throw off the Water that may fall on them.

But as these Stoves are so much longer and broader, than those before described, so there should be two Ovens or Fire-places to each; for as these Stoves are design'd to contain the tenderest Plants, so the Air must be kept above the temperate Heat, as mark'd on the Botanical Thermometers. The Length of these Stoves should be fifty Feet, and the Width about eighteen. The two Ovens (or Fire-places) may be built at each End, and so the Flues carried to meet in the Middle, but they should have no Communication with each other, for that will prevent their Drawing, so that the Smoak will not pass thro' them freely. The Flues may be carried over each other six times, and if the lower Flue is made two Feet and a half deep in the Clear, and the other Flues are each twenty Inches deep, it will raise the whole Range about twelve Feet high, including the Covering of each, which will be sufficient to heat the Air contained in the House; for when the Smoak has passed thro' six of these Flues, there will be no Heat left in it, so it will not be of any Service to carry a greater Number of them than can be useful; these Flues should discharge their Smoak at each End, for if the Vents are joined together, it often prevents their drawing well.

As the Culture of the *Anana*, or Pine-apple, hath been of late more generally known, and practised in most Parts of *England*, so there have been many Experiments tried, and several different Methods used to cultivate this Fruit, whereby the Trouble and Expence, which attended this when the Plants were first introduced, is greatly diminished. For after the first Charge of building the proper Stoves, the Trouble and Expence of cultivating these Fruits, is not greater than that for early Melons and Cucumbers; and the Success much more certain; as these are not affected by bad Seasons, or spoiled by great Rains, which too frequently destroy the Crops of Melons in *England*; so that after having been at great Expence and Trouble in raising of Melon-plants, and to bring them to Fruit, they are many times totally destroyed; or if any of the Fruit remains to ripen, they are rendered

so watry and ill tasted, as to be unpalatable and unwholsome; whereas the *Ananas*, which do constantly remain in the Stove, being protected from bad Weather, are not subject to these Disasters, from the Inclemency of our Climate; and when the Plants are in a good State of Health, the Fruit is generally well flavoured.

But as there have been some new Improvements made in the Culture of the Pine-apple, since the Time of printing what I had wrote on that Article, so I shall subjoin what has come to my Knowledge on that Head, to this Account of the Stoves, where it may be more properly placed, than by Way of Supplement. One of the most considerable Improvements, which has been of late made, is that of planting the Plants (when pretty well grown) into the Tanners-bark out of the Pots. The first Person who practised this, was Mr. *Blackbourn*, a very curious Gentleman in *Lancashire*; who has a great Parcel of these Plants, and a large Collection of other curious Exotics, which are in great Perfection. But as I have not been inform'd of his Method of planting the *Ananas*'s, so I shall set down what I have practised, and have found to succeed extremely well.

The Suckers or Crowns of the *Ananas*, should be planted in small half-penny Pots, filled with fresh rich Earth, and plunged into the Hot-bed of Tanners-bark, in the same Manner as is usually practised, and hath been before directed. During the Winter Season they must be kept warm, and frequently watered, which will greatly promote their Growth, so that a Frame contrived with the Flues in the Back Wall, in the Manner before described, will be the most convenient for raising of the young Plants, because they will be kept in the Bark-bed, which is a great Advantage, especially to the young Plants; for as their Pots are small, so when they are placed on the Flues of the Stove, or on Shelves, as is commonly practised, the Moisture passes away too fast from their Roots, and the Earth in the Pots soon becomes dry, which greatly retards the Growth of the Plants. Whereas when they are plunged in the Tan, the Moisture which arises from the Fermentation, will always supply the small Fibres, which are near the Hole in the Bottom of the Pot, with Nourishment, and greatly assist them; and in cold Weather, a small Fire will warm so small a Space of Air, as is included in one of these Frames.

The Suckers which are planted the latter End of Summer, or in Autumn, will have filled the small Pots with their Roots, by the middle of *April* following, when the Bark-bed should be renewed, and the Plants shaken out of these small Pots, and their Roots trim'd, and then planted into penny Pots, filled with light rich Earth as before. These Pots are about seven Inches over at the Top, and will be large enough to contain the Plants, until they are planted into the Tan; for when their Roots are confined, the Plants do always make a greater Progress, than if they are frequently

frequently shifted, or planted in large Pots; therefore they should remain unremoved in these Pots, till the *Michaelmas* following, observing when the Tan declines its Heat, to stir it up again, and add some fresh Tan to it, which will renew the Heat, and cause the Plants to grow vigorously; but this should always be done in good Weather, that the Plants may not receive any Injury by being exposed to the open Air. During the Summer Season, if the Nights should prove cold, it will be proper to cover the Glasses of the Hot-bed with Mats, which will be of great Service to the Plants, by keeping them constantly growing; for they cannot grow too freely, since the greater Strength they obtain before *Michaelmas*, the larger will be their Fruit. But great Care should be had, not to plunge them too close together at this Season, for that will cause them to draw up weak; so that their Leaves will be of a great Length, but their Stems will be small, and consequently their Fruit will be so too; since it is only such Plants as are large and stocky at Bottom, which produce the largest Fruit. For which Reason also, the Bark-bed should always be kept up to a proper Height, allowing only Room for the Leaves of the Plants to stand under the Glasses, without being bruised or injured; for when the Bed sinks, so as to leave a large Vacancy between the Plants and the Glasses, the Plants will draw up weak, by being too low to receive the Benefit of the free Air, which should be every Day admitted to them in warm Weather, by raising of the Glasses with Stones, Bricks, &c. in proportion to the Warmth of the Season. They must be constantly watered three or four Times a Week in hot Weather, but the Quantity of Water must be proportioned to the Dryness of the Earth in the Pots, for some Pots will let the Water pass off much sooner than others; and some of the Plants will imbibe the Moisture faster; so that when the Earth in any of the Pots appears moist, they should not be watered, for which Reason, the Plants must be carefully observed whenever they have Water given to them. In cool or dark Weather, when the Glasses of the Hot-bed will not admit of being raised to let in fresh Air; the Steam of the Hot-bed, and the Vapours arising from the Perspiration of the Plants, will condense to Moisture against the Glasses, which will fall in Drops on the Plants, and is often very injurious to them: to prevent which, the Glasses should be turned upside down to dry, or the Moisture wiped off them in wet Weather, when they cannot be turned. But where a Person will be at a small Expence, this Evil may be more effectually remedied, by having Shutters of Bays, or other woollen Cloth placed under the Glasses, which will imbibe all the Moisture which arises from the Bed, and should be taken out every Morning, and placed in the open Air to dry, and be put in every Evening, or in cold foggy Days, when there is no Sun-shine. These Contrivances I have known used with great Success, in raising *Cucumbers* and *Melons* very early in the Spring; for in those Hot-beds

which are made with Horse-dung, there is always a much greater Steam, than ever arises from the Tanners-bark, and this being of a very rancid Nature, is oftentimes destructive to these tender Plants, especially in moist dark Weather, which frequently happens in the Winter Months in *England*. But in Stoves or in Frames, where there are Fires, this Vapour being kept rarefied, seldom condenses against the Glasses in such Quantities as to injure the Plants. Therefore, these Shutters (if I may be allowed so to call them) are not so necessary for these, especially at such Times when the Fires are continued every Night; but in cold Weather, in the Spring, or Autumn, when the Fires are discontinued, or in such Frames where there is no Convenience to make Fires; these Shutters are of great Use, to imbibe the Moisture arising from the Bed.

These Shutters are easily made, for there is nothing more required, but to make slight Frames (somewhat like the stretching Frames for Pictures) to fit the Inside of the Frame, so as to lie just under the Glasses, to these Frames should be nailed the Bays, in like manner as is done for Screens, with a List of Tape round the Edges where the Nails are driven, which will secure the Bays from being torn by the Nails. The coarser the Bays which is used for this Purpose, the more Moisture it will imbibe, so that the Expence will be less; but it should not be of a dark or black Colour, because the Rays of Light will be absorbed by it, to the Prejudice of the Plants. In dark cloudy or foggy Weather, which sometimes continues for several Days, in the Winter Season, these Shutters should be taken out twice every Day, and placed near a Fire to dry; for in the Morning they must be taken out to dry the Moisture from them, which they had imbibed in the Night; and in the Afternoon they must be dried again, that they may be put into the Frame dry in the Evening. But as it will be difficult to dry these Shutters in damp Weather, so it will be proper to have two Sets of them, one for the Night, and the other for the Day; so that by shifting them alternately, they will have Time enough to be thoroughly dried, and the Bed be constantly supplied with them, by which Means there will be no Time for the Vapours to condense against the Glasses.

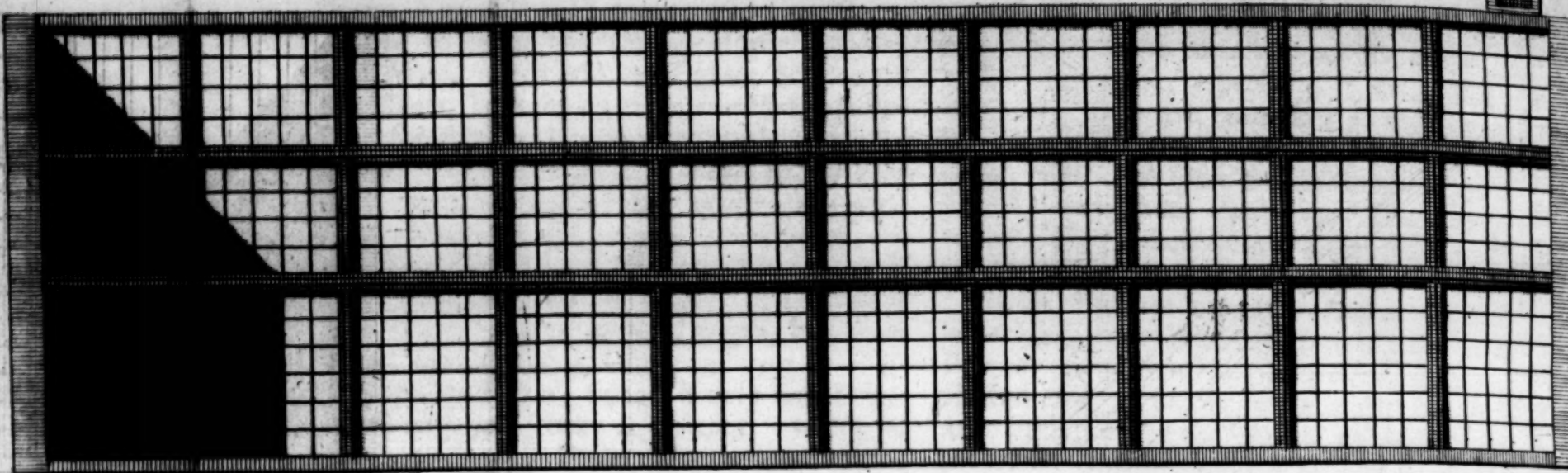
But to return to the Management of the *Ananas* Plants: About the latter End of *September*, or the Beginning of *October*, the Plants must be planted into the Tan; at which Time there must be some new Tan provided, in Quantity proportionable to the Size of the Pit; so that about half the Tan it will contain should be fresh, which should be well mixed with some of the old Tan, and about ten Inches Thickness all of the old Tan, laid on the Top of the Bed, into which the Plants must be placed. After the Bed is well mixed, and the Tan levelled on the Surface, which should be raised five or six Inches above the Level of the Walk, to allow for the Settling of the Bark; then the Plants should be carefully shaken out of the Pots, preserving the Ball

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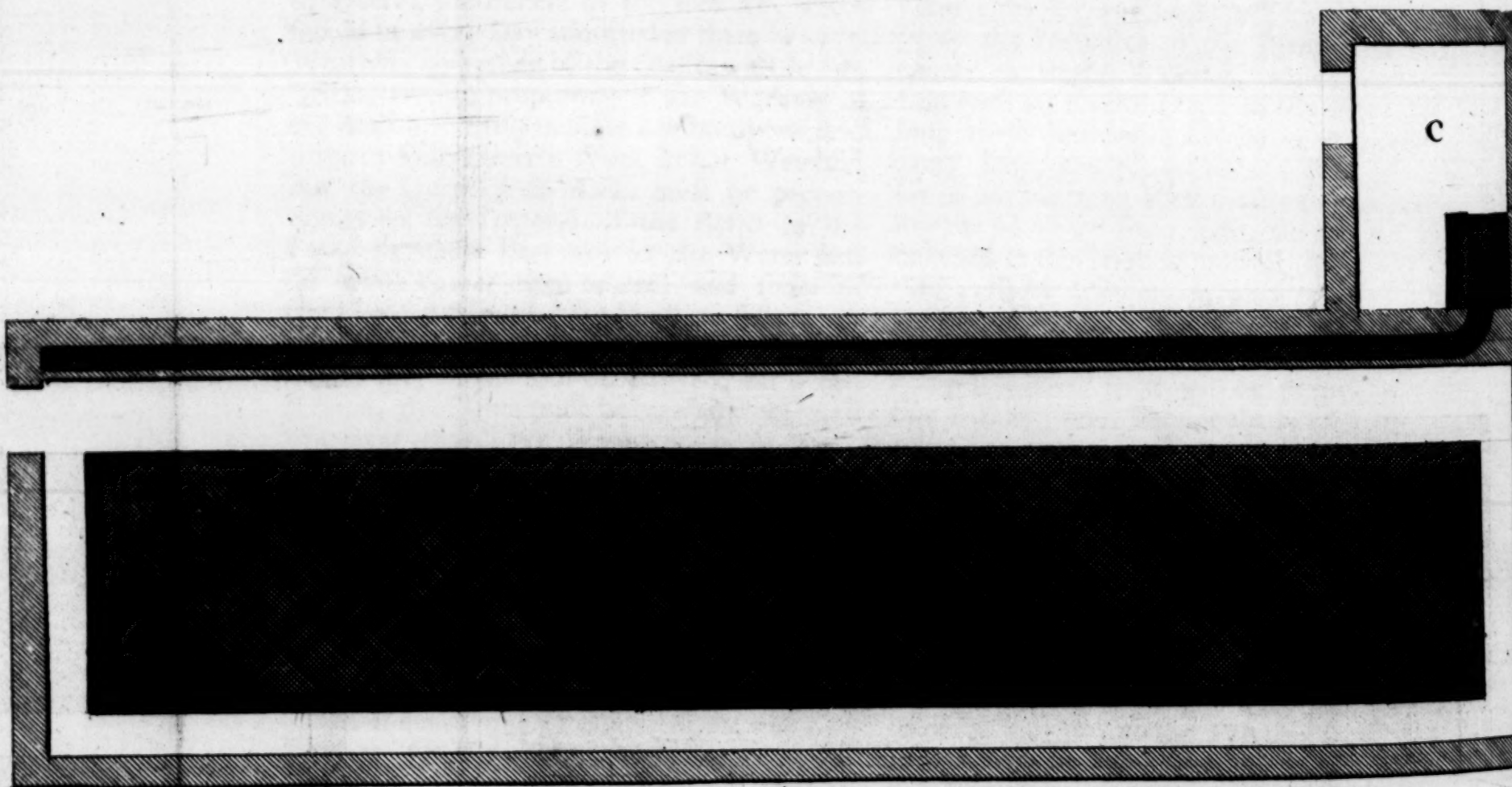
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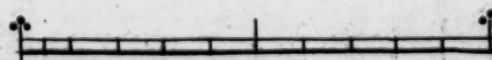
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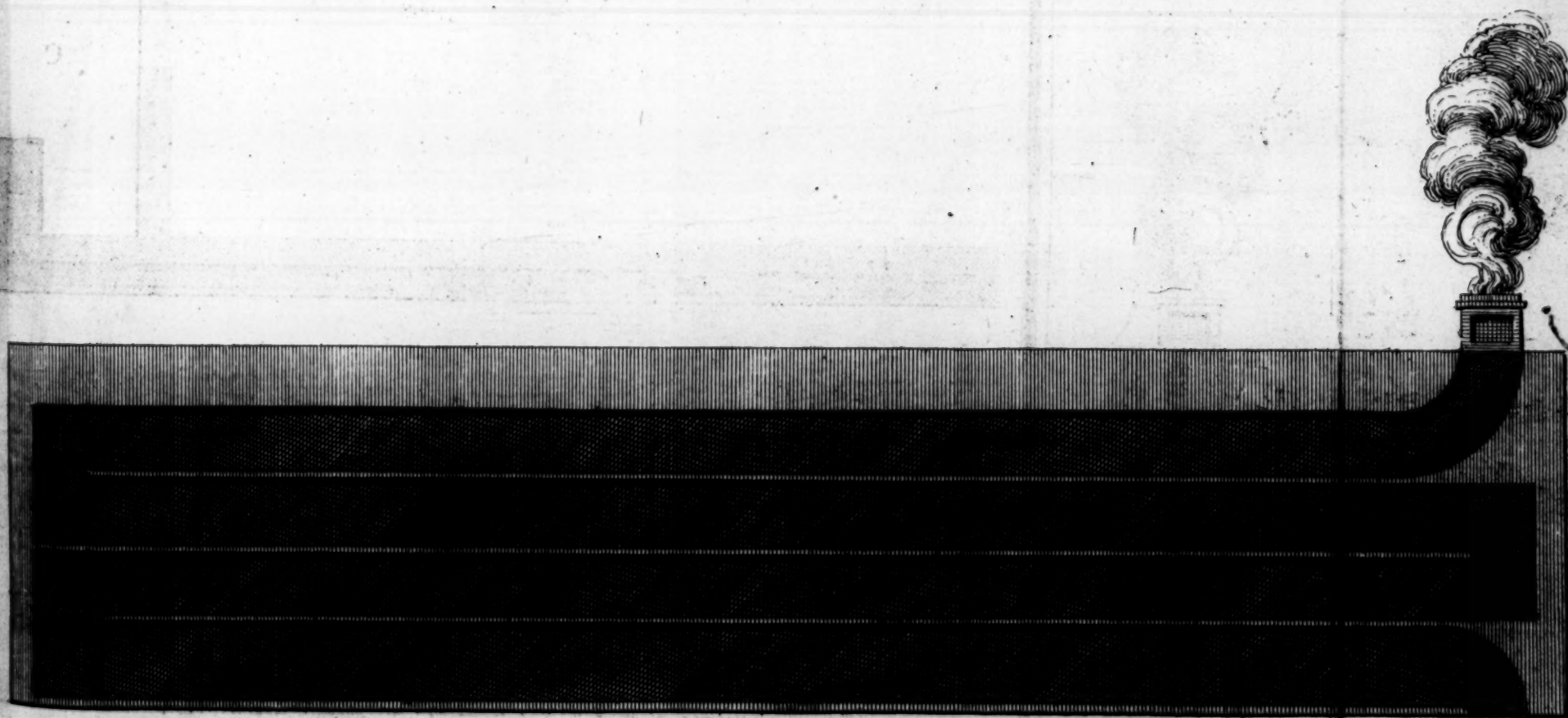
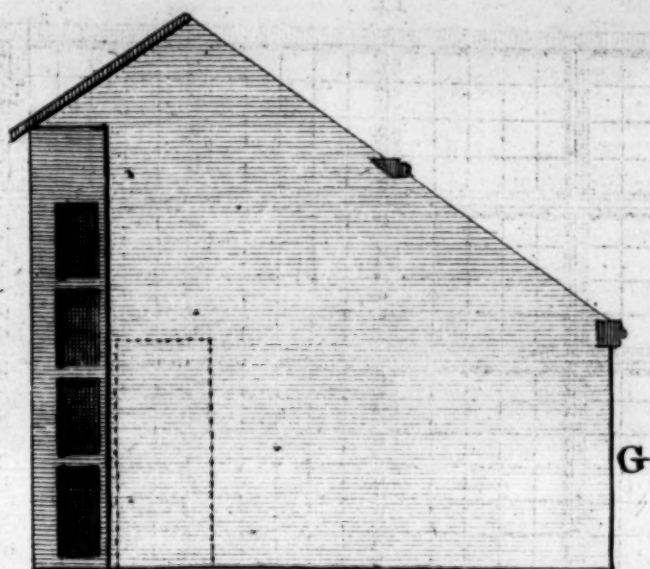
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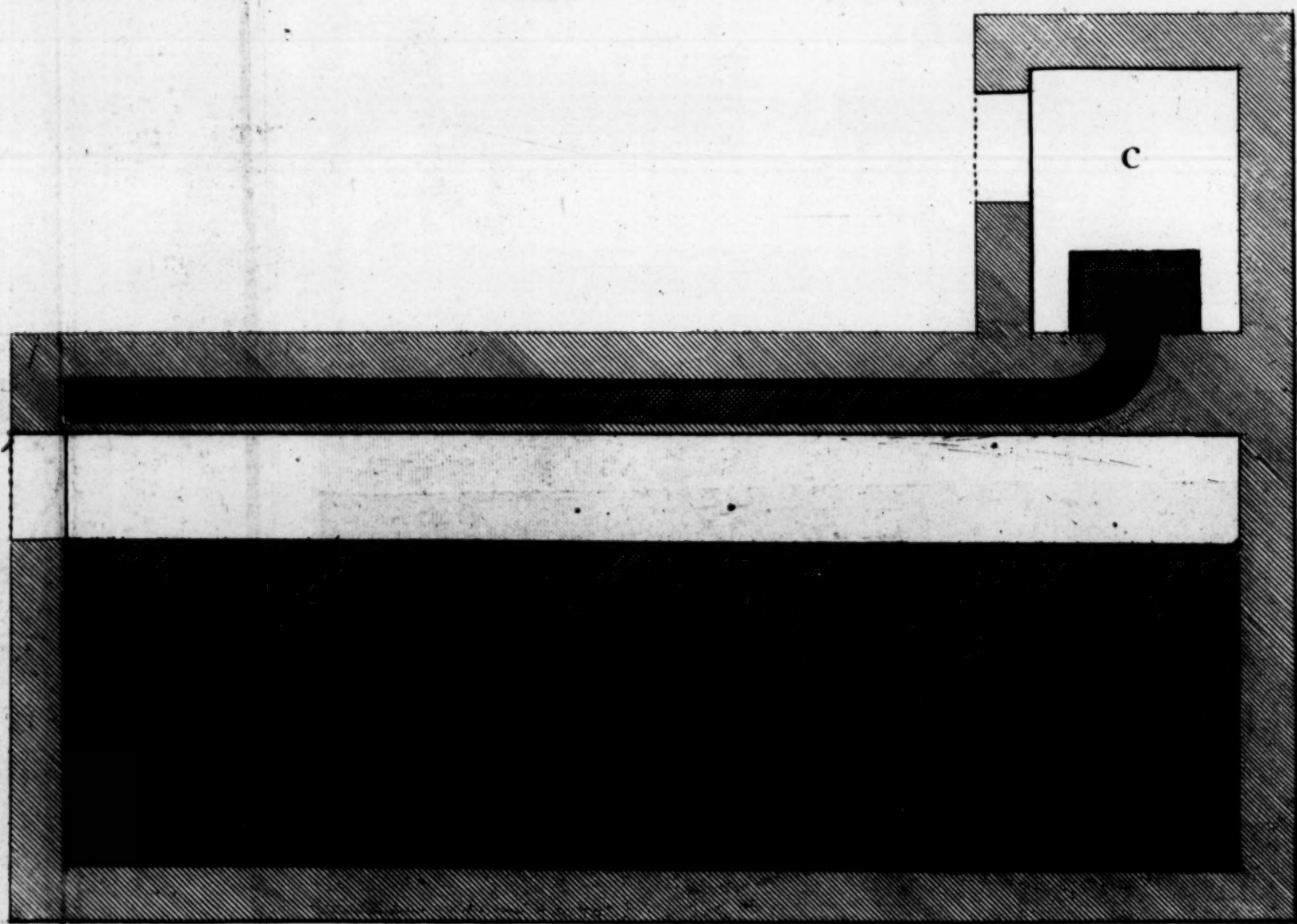


A The ground plat of the Stove. B The Bark bed in the Stove. C The Shed for the Fire place
D The Oven where the Fire is made. E The first Flue thro' which the smoak passes
F.F.F.F. The Back Wall representing the four flues rising over each other.
G is the upright of the Stove. H is the representation of the upright and Sloping glases



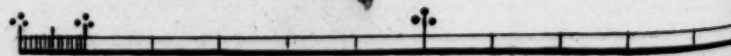
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A The ground plat of the Stove. B The Bark bed in the Stove. C The Shed for the Fire place.
D The Oven where the Fire is made. E The first Flue thro' which the Smoak passes
G Is the elevation of the Stove. H Is the representation of the Back Wall with the four
Flues rising over each other. I represents the Sloping Glasses in front.

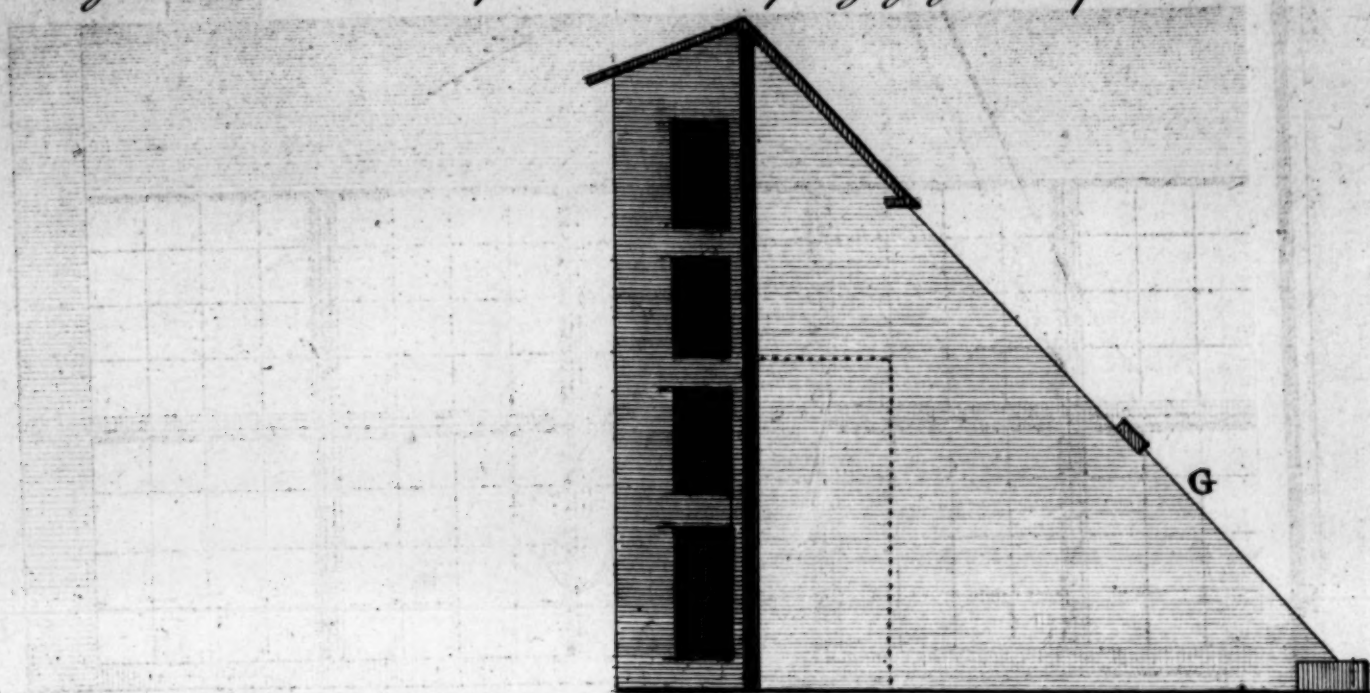
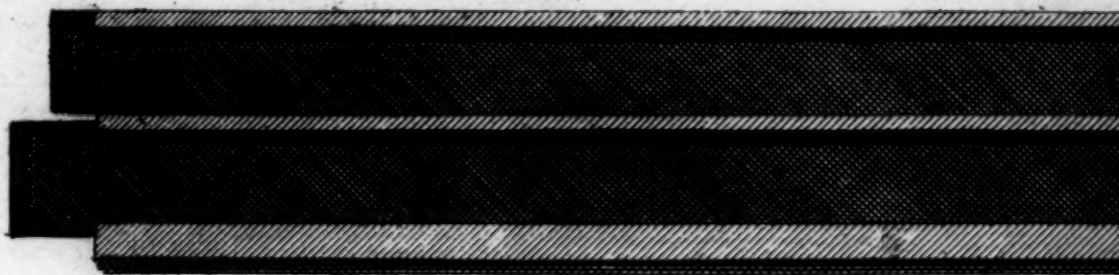
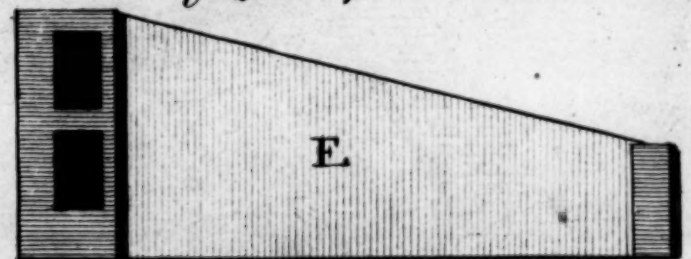


Plate 3.

A is the Pit to contain the Tanner's Bark.
B is the Oven for the Fire.
C is the Flue first rising from the Fire.
D Shows the two flues in the Wall.
E is the Section of the Frame.
F represents the Glases of the Frame.



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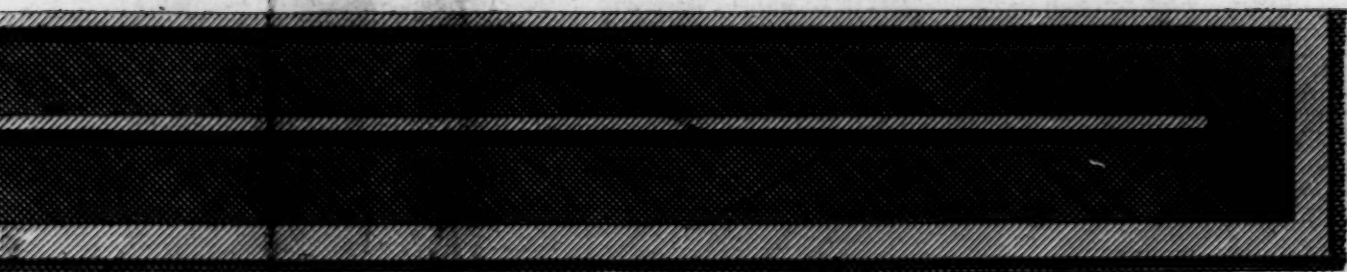
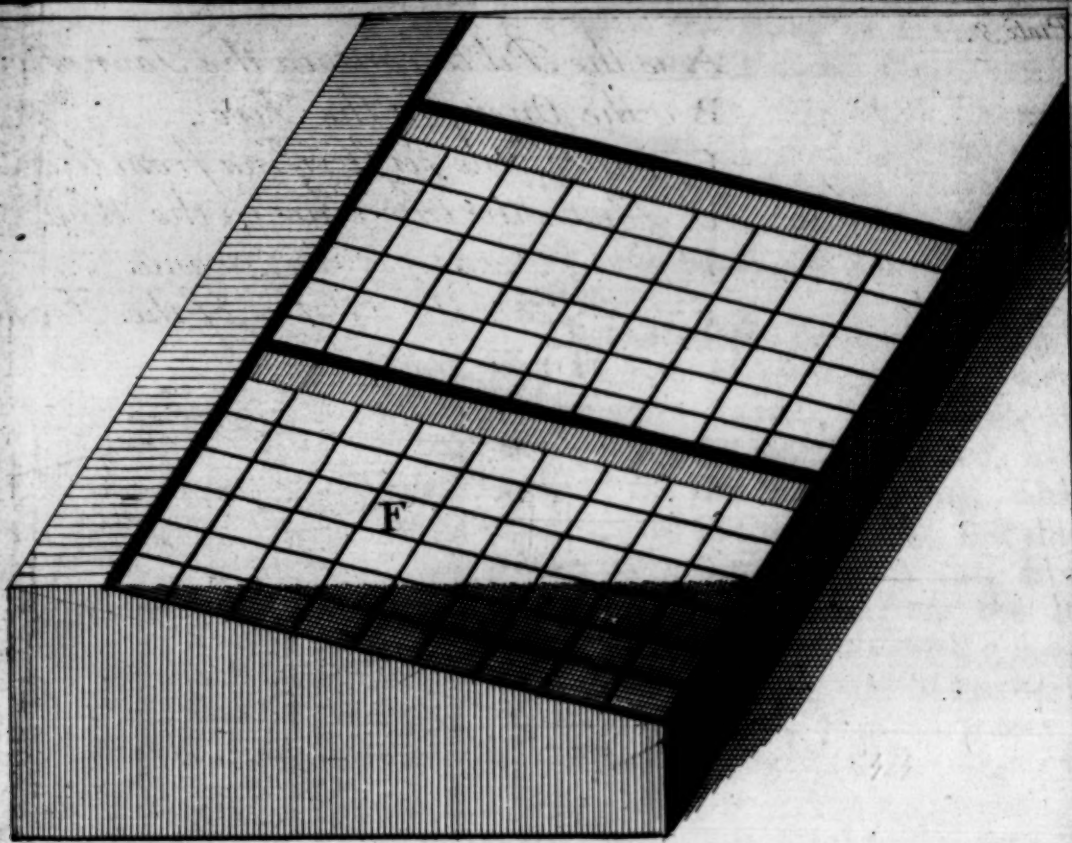
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Ball of Earth to their Roots; and after having taken off the decayed Leaves at the Bottom of the Plants, they should be planted into the Bark-bed, regularly in Rows, about two Feet asunder, or less, according to the Size of the Plants, for if they have Room to stand without crowding each other too much, it will be sufficient, because the Plants will not grow much more in Leaves, but will, soon after they have taken Root in the Tan, begin to spread open their Hearts, and prepare to shew their Fruit; which those which are thus treated seldom fail of doing by *Christmas*, or soon after; so that the Fruit will ripen much earlier in the Summer, than those which are kept in Pots, because they fruit earlier in Winter, and then do not receive any Check in the Spring. When these Plants are well rooted in the Tan, they will thrive much faster than those in Pots, and their Roots will extend quite over the Bark-bed, so that the Fruit will be well nourished, and the Stems of these Fruit being much stronger than those in Pots, will support the Fruit much better.

The Plants which are thus planted in the Tan will require less Water than those in the Pots, especially in Winter, during which Season, they need not be watered oftener than twice a Week, and the Quantity given to each Plant should not be more than a Pint; but in the Summer, they will require a larger Share of Water, and to be oftener repeated. When the Plants are placed into the Tan, it will be proper to fix down a few Stakes round the Bark-bed, to which a Couple of Lines of Packthread may be fixed to surround the Bed; the lowest of which should be about a Foot above the Bark, and the other a Foot above that. The Use of these Lines is to support the Leaves, so as to bear them out of the Walk, that they may not be broken or bruised, by Persons walking near them; which is a much better Method than cutting off the large Leaves, as is most commonly practised, which is certainly injurious to the Plants, because they not only bleed at the wounded Parts, but do also imbibe some noxious Damps, from the circumambient Air.

As the Plants which are planted in the Tan cannot be removed in the Spring, so it will be proper to stir the Surface of the Bark-bed at that Season; but this must be carefully performed with the Hands, so as not to break or bruise any of the Leaves of the Plants: And if at the same Time a little new Tan is added, to raise the Surface of the Bed where it may have sunk too much, it will not be amiss, provided Care be taken not to raise the Tan too high about the Stems of the Plants, which would cause the under Leaves of the Plants to decay. During the Summer Season they must be managed in the same Manner, as hath been directed for those Plants which are kept in Pots, with this Difference only, viz. that they will require less Water, and not so large a Share of Air; for as the Heat of the Tan will be nearly spent before Summer, so the only Warmth of the Stove will be what is occasioned by the Heat of the Sun,

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for I do not approve of making any Fires in the Stoves in Summer, unless there is an absolute Necessity for it, which can never happen but when the Weather is very bad, and no Sun appears for some Days, and then there should be only very slight Fires made, and those continued no longer than during the dark Weather; for one Hour's Sun-shine in the Spring and Autumn, when the Rays are weak, will warm the Air of the Stoves sufficiently.

There are some Persons who will object to this Method of planting the Plants in Tan, for no other Reason, but because they think there should be new Tan added, to renew the Heat of the Bed in the Spring, which cannot be practised in this Method: But this I am satisfied there is no Necessity for, from several Experiments, as well as from the Reason of Things; for I have observed a much greater Warmth in the Tan, after it has been a whole Year in the Bed, than there ever is in the Earth eighteen Inches below the Surface in the hottest Countries where the *Ananas* grow; so that if the Air of the Stove is kept sufficiently warm, there will require no additional Heat to the Roots of the Plants.

As these Plants will ripen their Fruit earlier than those in Pots, so they will be all of them cut before the Time for bringing the young Plants into the Stove for the succeeding Year; therefore the old Stools may be taken out of the Bed, and the Suckers taken off for an Increase (if any of them are then remaining on); and if a larger Supply of Plants are wanting, the Stools may be planted into Pots, and preserved thro' the Winter, which will put out new Suckers the following Spring; but where this is not wanted, they may be thrown away.

SURIANA.

The Characters are;

It hath a Rose-shaped Flower, consisting of several Petals, which are placed in a circular Order; from whose Empalement arises the Pointal, which afterwards becomes the Fruit, which generally consists of four Capsules, in which are included four roundish Seeds.

We know but one Species of this Plant, viz.

SURIANA *foliis portulacæ angustis*. Plum. Nov. Gen. Suriana, with narrow Purslain-leaves.

This Plant was so named by Father Plumier, who discovered it in the French Settlements in America, in Honour to Dr. Joseph Surian of Marseilles, who was a very curious Botanist.

The Seeds of this Plant were brought from the Havanna, by the late Dr. William Houston, who found the Plants growing there in great Plenty on the Shore, in moist Places where the Salt-water usually flows. It also grows plentifully in some Parts of the Island of Jamaica.

It is propagated by Seeds, which must be sown on a Hot-bed early in the Spring, and when the Plants are come up, they must be carefully cleaned from Weeds, and frequently refreshed

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refreshed with Water. In warm Weather the Glasses of the Hot-bed should be raised every Day, to admit fresh Air to the Plants, to prevent their drawing up too weak. When the Plants are fit to transplant, they should be taken up carefully, and each planted in a separate small Pot, filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; after which Time they must be duly watered every Evening in hot Weather, and they must have fresh Air admitted to them every Day in Proportion to the Warmth of the Season. In this Hot-bed the Plants may remain till the Autumn, when the Nights begin to be Cold, at which Time they should be removed into the Stove, and plunged into the Bark-bed. During the Winter Season these Plants must be kept warm, especially while they are young, otherwise they will not live thro' the Winter in this Country; they must also be frequently refreshed with Water, but it must not be given to them in large Quantities in cold Weather, for too much Moisture in Winter, will soon destroy them. These Plants do make but slow Progress the first Year, but afterwards they will grow pretty freely, if they are not stunted in Winter. They must constantly be kept in the Stove in this Country, and if they are plunged into the Bark-bed, they will make the greater Progress. In Summer they must have a large Share of Air, by opening the Glasses of the Stoves, and if their Leaves are covered with Filth (which the Plants in Stoves do often contract) they should be carefully washed with a Sponge, otherwise the Plants will not only appear unsightly, but it will retard their Growth.

These Plants do usually grow about seven or eight Feet high, and as they retain their Leaves throughout the Year, so they afford an agreeable Variety amongst other Plants in the Stove.

SYMPHYTUM, Comfrey.

To this Article must be added;

1. SYMPHYTUM minus, tuberosâ radice. C. B. P. Smaller Comfrey, with a Tuberosè Root.

2. SYMPHYTUM Ecbii folio ampliore, radice rubra, flore luteo. Inst. R. H. Comfrey, with a broad Vipers-bugloss leaf, a red Root, and a yellow Flower.

3. SYMPHYTUM Ecbii folio ampliore, radice rubra, flore exalbido. Inst. R. H. Comfrey, with a broad Vipers-bugloss leaf, a red Root, and a whitish Flower.

4. SYMPHYTUM Ecbii folio angustiore, radice rubra, flore luteo. Inst. R. H. Comfrey, with a narrow Vipers-bugloss leaf, a red Root, and a yellow Flower.

5. SYMPHYTUM Creticum, ecbii folio angustiore, longissimis villis horrido, flore croceo. Tourn. Cor. Candy Comfrey, with a narrow Vipers-bugloss leaf, covered with very long Hairs, and a Saffron colour'd Flower.

6. SYMPHYTUM Orientale, ecbii folio ampliore, longissimis villis horrido, flore croceo. Tourn. Cor. Eastern Comfrey, with a broad

Vipers-bugloss leaf, covered with long Hairs, and a Saffron coloured Flower.

7. SYMPHYTUM Orientale, ecbii folio, flore albo, tenuissimo. Tourn. Cor. Eastern Comfrey, with a Vipers-bugloss leaf, and a very narrow white Flower.

8. SYMPHYTUM Orientale, ecbii folio minore, flore nunc albo nunc flavescente. Tourn. Cor. Eastern Comfrey, with a smaller Vipers-bugloss leaf, and a Flower sometimes white, and at other Times of a yellowish Colour.

9. SYMPHYTUM Orientale, oleæ folio, argenteo, flore flavescente. Tourn. Cor. Eastern Comfrey, with a Silvery-olive leaf, and a yellowish Flower.

10. SYMPHYTUM Orientale, angustifolium, flore cæruleo. Tourn. Cor. Eastern Comfrey, with a narrow Leaf, and a blue Flower.

11. SYMPHYTUM Constantinopolitanum, borraginis folio & facie, flore albo. Tourn. Cor. Constantinople Comfrey, with the Leaf and Face of Borage, and a white Flower.

12. SYMPHYTUM Orientale, folio subrotundo aspero, flore cæruleo. Tourn. Cor. Eastern Comfrey, with a rough roundish Leaf, and a blue Flower.

13. SYMPHYTUM Orientale, folio subrotundo aspero, flore cæruleo odoratissimo. Tourn. Cor. Eastern Comfrey, with a rough roundish Leaf, and a very sweet blue Flower.

The first Sort here mentioned is pretty common in several English Gardens, where it is preserved for the Sake of Variety: This increases pretty fast by its Roots, so is seldom propagated by Seeds. The second, third, and fourth Sorts, grow wild in Spain and Portugal, from whence their Seeds may be obtain'd, these have red Roots, somewhat resembling those of the Alkanet, and are by some Botanists ranged amongst the Alkanets.

The other Sorts were discovered by Dr. Tournefort, in the Levant, from whence he sent their Seeds to the Royal Garden at Paris. These are all of them pretty hardy Plants, so may be propagated by sowing their Seeds on a Bed of fresh undunged Earth, in the Spring of the Year, and when the Plants are come up, they should be carefully clear'd from Weeds, and where they are too close, they must be thinned, so as to allow them four or five Inches distance from each other; and the following Michaelmas, they may be transplanted where they are design'd to remain, which should be in fresh undunged Earth, at about two Feet distance from each other, where they may remain to flower and seed.

TABERNÆMONTANA.

The Characters are;

It hath a tubelous Flower, consisting of one Leaf, which is spread open toward the Top, and divided into several Parts; from the Bottom of

of the Flower arises the Pointal, which afterwards becomes the Fruit, composed of two Capsules which open lengthways, and are filled with oblong Seeds, surrounded with a thin Pulp.

The Species are ;

1. *TABERNÆMONTANA lactescens, citrii foliis undulatis.* Plum. Nov. Gen. Milky Tabernæmontana, with a waved Citron-leaf.

2. *TABERNÆMONTANA lactescens, Lauri folio, flore albo, siliquis rotundioribus.* Houst. Milky Tabernæmontana, with a Bay-leaf, a white Flower, and rounder Pods.

The first of these Sorts is common in the Island of *Jamaica*, and in several other Places in the warm Parts of *America* ; where it rises to the Height of fifteen or sixteen Feet, having a smooth strait Trunk, covered with a whitish Bark ; at the Top of the Trunk come out the Branches which are irregular, and beset with shining green Leaves ; from the Foot-stalks of these Leaves, are produced the Flowers which are yellow, and extremely sweet-scented : these Flowers are succeeded by two forked Pods, in which the Seeds are contained. This Genus of Plants is very near of kin to the *Nerium* or *Oleander*, and has been by some Botanical Writers ranged under that Head ; but the Seeds of this Genus have no Down adhering to them, as have those of the *Oleander*, and being included in a soft pulpy Substance, Father *Plumier* has constituted this Genus, in Honour to Dr. *James Theodore*, who was called *Tabernæmontanus*, from a little Village in *Germany*, where he was born. He was one of the most knowing Botanists of his Age, and published at *Francfort*, a Folio, in a long Form, in the Year 1590, in which are the Figures of Two thousand, Two hundred, and Fifty Plants.

The second Sort was discovered at *La Vera Cruz*, by the late Dr. *William Houstoun*, who sent the Seeds into *England*, from whence several of the Plants have been raised.

Both these Plants are very impatient of Cold, so will not live in this Country, unless they are placed in a warm Stove ; they may be propagated by Seeds, which should be sown early in the Spring, on a Hot-bed ; and when the Plants are come up, they must be carefully transplanted into small Pots, filled with light rich Earth, and then plunged into a Hot-bed of *Tanners-bark*, being careful to shade them in the Heat of the Day, until they have taken new Root ; after which Time, they must have free Air admitted to them every Day when the Weather is warm, but if the Nights should prove cold, the Glasses of the Hot bed should be covered with Mats every Evening, soon after the Sun goes off from the Bed. These Plants must be often refreshed with Water, but it must not be given to them in large Quantities especially while they are young, for as they are full of a milky Juice, so they are very subject to rot with much Moisture.

The Plants may remain during the Summer Season in the Hot-bed, provided the Tan is stirred up to renew the Heat when it wants, and a little new Tan added ; but at *Michaelmas*, when the Nights begin to be cold, the

Plants should be removed and plunged into the Bark-bed in the Stove, where, during the Winter Season, they must be kept in a moderate Degree of Warmth ; and in cold Weather they should have but a little Water given to them, lest it should rot them. As these Plants are too tender to live in the open Air in this Country, so they should constantly remain in the Stove, where, in warm Weather, they may have free Air admitted to them, by opening the Glasses of the Stove, but in cold Weather they must be kept warm ; with this Management the Plants will thrive and produce their Flowers, and as they are always green, so they will make a pleasant Diversity amongst other tender exotic Plants in the Stove.

These Plants may also be propagated by Cuttings, during the Summer Season ; which should be cut off from the old Plants, and laid to dry in the Stove five or six Days before they are planted, that the wounded Parts may heal, otherwise they will rot. These Cuttings should be planted in Pots filled with fresh light Earth, and plunged into the Hot-bed of *Tanners-bark*, observing to shade them from the Sun in the Middle of the Day in hot Weather, as also to refresh them now and then with a little Water. When the Cuttings have taken Root, they may be transplanted into separate Pots, and treated in the same Manner as those which are raised from Seeds.

TAMNUS, The Black-briony.

To this Article must be added ;

1. *TAMNUS Cretica, trifido folio.* Tourn. Cor. Black-briony of *Crete*, with a trifid Leaf.

2. *TAMNUS Americana, tubifera, radice fungi-formi.* Plum. American Black-briony, with a Root resembling a Mushroom.

3. *TAMNUS Americana, racemosa, minor.* Plum. Smaller branching American Black-briony.

4. *TAMNUS Americana, racemosa, major.* Plum. Greater branching American Black-briony.

5. *TAMNUS Americana, amplis foliis, subtus purpureis.* Plum. American Black-briony, with large Leaves, which are purple on their Under-side.

6. *TAMNUS Americana, anguria folio.* Plum. American Black-briony, with a Water-melon leaf.

The first of these Sorts was discovered by Dr. *Tournefort*, in the *Levant*, from whence he sent the Seeds to the Royal Garden at *Paris*. This is a very hardy Plant, so will thrive in the open Air in this Country. It may be propagated by Seeds, which should be sown in the Autumn (soon after they are ripe) on a Bed of fresh Earth, and when the Plants are come up, they must be kept clear from Weeds, and thin'd where they are too close together, which is all the Management they will require, till the Autumn following, when the Roots should be taken up as soon as the Leaves decay, and transplanted where they are designed to remain, which should be near

a Hedge, on which they may climb, otherwise the Branches will trail on the Ground, and in wet Seasons will rot.

The other five Sorts were discovered by Father Plumier in America, these are very common in *Jamaica*, and several other Places in the *West-Indies*, where the Wood have not been clear'd; but these are too tender to live in the open Air in *England*, so must be preserved in Stoves, and kept in a moderate Temperature of Warmth in the Winter Season. They are propagated by Seeds, which should be sown on a moderate Hot-bed early in the Spring; and when the Plants are come up, they should be each planted into a separate small Pot, filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, where they should remain during the Summer Season, observing to water them plentifully in hot Weather, as also to admit a large Share of Air to them, by raising the Glasses of the Hot-bed with Stones every Day. In the Autumn the Branches of these Plants will decay to the Root, at which Time the Pots should be removed and placed in the Stove, where, during the Winter Season, the Roots will remain in an unactive State, so should not have too much Moisture lest it rot them; in the Spring they will shoot out again, when the Pots should be placed near some Support to which their Shoots may fasten, otherwise they will twine round whatever Plants do grow near them; for in the Countries of their natural Growth, they climb up the tallest Trees to a very great Height. These are Male and Female in different Plants, as is the common Sort.

TANACETUM, Tansey.

To this Article must be added;

1. TANACETUM *Orientale*, minus. *Tourn.* Cor. Smaller Eastern-tansey.
2. TANACETUM *Davuricum*, humilius, foliis tenuiter dissectis. *Amman.* Tansey of *Davuria*, with fine cut Leaves.
3. TANACETUM *Africanum*, fruticans, multiflorum, foliis tanaceti vulgaris decuplo minoribus. *Boerb. Ind.* Shrubby African-tansey, with many Flowers, and Leaves like the common Sort, but ten Times less.

The first Sort was discovered by Dr. *Tournefort* in the *Levant*, from whence he sent the Seeds to the Royal Garden at *Paris*. The second Sort was sent to me from *Petersburgh*, by Dr. *Amman*, who is Professor of Botany in that University. These are both very hardy Plants, so may be propagated by Seeds, or parting of their Roots, in the same Manner as is practised for the common Sort, but the Roots of these Kinds do not creep so much as those of the common Sort.

The third Sort was brought from the *Cape of Good Hope*, to some curious Gardens in *Holland*, where it has been propagated and been dispersed to several Parts of *Europe*. This Kind will rise to the Height of three or four Feet, and become shrubby, producing a great Number of Flowers at the Extremity of every

Branch, early in the Spring, but seldom perfects its Seeds in this Country. It may be propagated with great Ease, for every Cutting which is planted in Summer will take Root, provided they are shaded from the Sun, and duly watered in dry Weather: When these Cuttings are rooted, they should be transplanted into Pots filled with fresh Earth, and placed in a shady Situation, until they have taken new Root, after which Time they may be placed amongst other hardy exotic Plants, in a shelter'd Situation, where they may remain until *October*, when they must be removed into the Green-house, and placed where they may enjoy as large a Share of free Air as possible in mild Weather, otherwise the Shoots will draw weak and be unsightly. In *February* these Plants will begin to flower, and they will continue flowering several Months, so do afford an agreeable Variety amongst other Plants in the Green-house; and being hardy, in respect to Cold, and easy to propagate, renders them worthy of a Place in every good Collection of Plants.

TAN, or Tanners-bark.

In the Account of this which is in the former Volume of the *Gardeners Dictionary*, I have mentioned only two or three Sorts; but upon being more acquainted with it, I find there are several Degrees of Fineness, to which the Tanners do grind their Bark; and in some Countries they only chop their Bark into large Pieces before they use it, so that the latter Sort is not proper for Hot-beds, for the Pieces being very large, do lie so hollow, as to admit the Air amongst it, and unless there is a good Quantity of small Bark mixed with it, it seldom ferments well, therefore where the ground-Bark can be procured, it should always be preferred to that which is chop'd. But where no other Sort can be procured, there should be a Quantity of Bran, Saw-dust, or Chaff, mixed with the Tan, which when well mixed, will cause it to ferment, and whenever the Heat abates, if the Tan is stirred up from the Bottom of the Bed, and some fresh Bran or Saw-dust added, it will renew the Heat of the Bark: for as the Pieces are large, so it will be much longer before it is consumed than the small Bark, for so long as any Substance remains in it, there will be a Heat continued, which may be encreased, by fresh Stirring of it, and adding a little new Bark, Bran, or Saw-dust.

The best Sort of Tan for Hotbeds, is, that which is ground of a midling Size, neither too small nor too large; this will ferment moderately, and continue it's Heat a long Time. Before the Tan is put into the Pit where the Hot-bed is design'd, it will be proper to lay it in a round Heap, until it begins to ferment, especially if it is in the Spring or Autumn; but in the Summer Season, there is no need of this Precaution, because at that Season, the Sun thro' the Glasses of the Hot-bed, will soon cause it to ferment; and where there is some warm Tan left in the Pit, to mix with the new,

new, that will also cause it to heat soon, provided the new Tan is not too wet.

The Thickness which I directed the Bark to be laid in the Hot-bed, was three Feet, and the Width at least four Feet, but it will be much better to have the Bed six or seven Feet wide, or more, where there is proper Convenience for it; because when the Bed is narrow, the two out-side Rows of Pots will receive little Benefit from the Heat; and where the Width is so great, two Feet and a half in thickness will be sufficient. For the same Reason also the Length of the Bed should be in proportion; therefore I should always prefer a Bed of twenty Feet long, to those which are shorter. There are some Persons who make their Tan-beds much wider than what is here mentioned; but I think they should not be more than eight Feet wide, because it will be very difficult to come at those Plants which are plunged in the middle of the Bed, without injuring those near the Sides, but this is only for Bark-pits in Stoves; for where the Hot-bed is made in Frames, it should not exceed six Feet and a half, which is full as wide as can be well reached, to water and weed the Pots which are plunged therein.

There are some Persons who imagine their Beds should always be very warm, so are frequently stirring them, and adding new Tan to them, and very often lay warm Horse-dung under the Tan, or round the Sides of it to increase the Heat; which is not necessary, because, unless it be to raise very difficult exotic Seeds, or to forward the Rooting of Plants in Spring or Autumn, there doth not require an extraordinary Heat to the Roots of Plants, which many times is very prejudicial to them; for, from some Experiments which were made by a Friend of mine at *Jamaica*, by placing Thermometers in the Earth at different Depths, he found the Heat nearly equal thro' the Year (excepting just at the rainy Seasons), at three Feet below the Surface; and this Heat was not greater than that of Tan when in a very slow Fermentation. So that when the Tan is too hot, it is not so proper for the Growth of Plants, as when the Warmth is moderate, which is a Proof of the Absurdity which some People are guilty of, in supposing they can produce as good Fruit of the *Ananas* with Bark alone, as those who have Stoves to warm the Air of the Stove, in which the Plants are placed; for altho' there is no necessity of a very great Heat to their Roots, yet the circumambient Air should be sufficiently warmed in Winter, otherwise the Plants will make no Progress; so that instead of shewing their Fruit in *January* and *February*, which is their proper Season, they do often fruit in *May* and *June*, and sometimes later, and consequently do not ripen till the following Winter, when the Sun having little Power of heating the Air, the Fruit are good for little. It is very common to see the Plants, which are placed in Stoves, dropping their Leaves in Winter, and pushing out new ones soon after, which seldom remain long on the Plants before they fall; this is frequently occasioned by the Bed being very warm in which they are placed, when at the same time

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the Air of the Stove is never sufficiently warmed, which is certainly a great Error; for by the Experiments which my Friend made with several Thermometers in *Jamaica*, he found that even in the coolest Seasons, the Spirit seldom fell so low as forty Degrees above the freezing Point, in the Night, and in the day Time at the same Seasons, the Spirit usually rose to sixty Degrees above the freezing Point. But in the hotter Seasons, the Spirit rose so high, as to break the Glasses of the common Thermometers when placed intirely in the Shade.

The Hot-beds in the Stoves which are made of good Tan, will rarely want renewing oftener than twice a Year, that is in the Beginning of *March*, and toward the End of *September*; but at neither of these times should the Bark be intirely taken out of the Pits; for if that which is most consumed is thrown out (which is generally the upper Part) and the rest mixed with the new Tan, it will ferment again slowly, and prevent the Bed from being too hot, which is frequently the Case when the Bed is intirely made of new Tan. But this is only to be understood of such Hot-beds, which are designed to maintain tender exotic Plants; for where they are made for raising of *Cucumbers* and *Melons*, the Beds should be intirely made of new Tan (excepting just about the Holes where the Plants are placed, which should have some old Tan, for the Plants to root in, after their Roots have extended thro' the Earth laid in the Holes) which should be laid in a Heap to ferment, at least a Fortnight or three Weeks, before the Bed is made, and then it will be proper to wait a Week, that the Bed may be in a proper Temperature of Heat, before the Plants are placed into it. Those Persons who have Tan in plenty, and are willing to use it for Hot-beds, to raise *Cucumbers* and *Melons*, should have their Plants in Baskets, so that they may at any time remove them into the Hot-bed, without injuring them: And if after they are placed in the Hot-bed, the Heat should be too violent, they may be raised up for a few Days until the Heat is abated, which will prevent the Heat from scorching the Roots of the Plants. The Hot-beds which are made of Tan, if they are properly managed, are much preferable to those made of Horse-dung, for these Purposes; for as the Heat will not be so violent as is that of Horse-dung, so the Plants will not be in so much danger of being scorched; and the Heat continuing longer in these Hotbeds, the Fruit will be brought forward much sooner; and the Plants will extend their Roots quite thro' the Tan, which will occasion their growing stronger, so that the Fruit will be large and well nourished.

When the Tan which is consumed in the Hot-beds is thrown out, it is a very proper Manure for stiff cold Land, but if it is laid on hot dry Ground, it should be spread very thin, otherwise instead of mending the Land, it will increase its Heat, and render it too light. There are some Persons who prepare their Flower-beds with rotten Tan, which from many Experiments I have found, has proved

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very pernicious to them, especially to *Ranunculus's* and *Anemonies*; for in Beds thus prepared, I have lost more than half the Roots, and those which have lived, produced very weak Flowers; and upon taking up their Roots the following Summer, I have found them smaller than when they were planted; whereas in some adjoining Beds, which were prepared with rotten Neats-dung, the Roots have very few of them died, and have flowered very strong, and made a large Increase; tho' they were planted at the same Season, in the same Situation, and had equal Management. I have also found that rotten Tan is very prejudicial to Orange Trees, therefore it should never be mixed with the Earth which is designed for them, nor for any other Plants which require a cool loamy Soil; for nothing is more prejudicial to them than this Manure.

But altho' this rotten Tan is improper for Flowers, Orange Trees, and many other Plants in Gardens, yet it is an excellent Manure for strong cold Corn-land; and I have often been surpris'd to see in some Countries great Heaps of Tan lie neglected in Tanners-yards, when the neighbouring Farmers have fetch'd much worse Manure ten or fifteen Miles for their Land; whereas if they were once to try this, they would prefer it to most other Manures yet known.

TAPIA, The Garlick Pear-Tree

The Characters are;

It hath an Anomalous Flower, consisting of four Petals or Leaves, which stand erect; the lower Part being occupied by a Number of Chives; the Pointal, which is fixed on a long Footstalk, rises from the Center of the Empalement, and afterwards becomes a globular fleshy Fruit, in the Center of which are included many Seeds, which are shap'd almost like Kidney's.

We have but one Species of this Plant; viz.

TAPIA arborea triphylla. Plum. Nov. Gen. The Gallick Pear-Tree, vulgô.

The Name *Tapia* is what the Americans call this Tree; so Father Plumier has constituted it as a new Genus by the same Name. The English Inhabitants of America call it Garlick-Pear, from the Fruit having a very strong Scent of Garlick.

This Tree is pretty common in *Jamaica*, and several other Places in the warmer Parts of *America*, where it usually rises to the Height of thirty or forty Feet, and spreads into many Branches. During the dry Seasons, these Trees are usually destitute of Leaves, but when the Rains begin, they thrust out their Flowers at the Extremity of their Branches, and soon after the Leaves come out, which are of a dark green Colour, and are always three together on the same Footstalk. When the Flowers fall off, the Pointal becomes a round Fruit, about the Size of a Tennis-ball; which when ripe, has a rough brownish Rind, and a mealy sweetish Pulp, somewhat like some of the *European* Pears, but has a strong Scent of Garlick. This Fruit is often eaten by the Inhabitants of *America*, by way of Desert, tho' they are not very

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tempting. The Swine, which are sometimes fattened with this Fruit, have the strong Scent of Garlick communicated to their Flesh. These Trees generally grow on low moist Land in several Parts of *America*.

In *Europe* this Tree is preserved by some curious Persons who cultivate tender exotic Plants. It is propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark; observing to shade them from the Sun every Day, until they have taken new Root; after which time, they must be treated in the same Manner as hath been directed for the *Guanabanus*; with which Management, this Plant will thrive and make a Variety in the Stove, amongst other tender exotic Plants.

TELEPHIOIDES, Bastard Orpine.

The Characters are;

It hath a Rose-shap'd Flower, consisting of several Petals, which are constantly placed in a circular Order; from whose Empalement rises the Pointal, which afterward becomes a roundish Fruit, divided into six Cells, each containing a single Seed of the same Form with the Cell.

The Species are;

1. *TELEPHIOIDES Græcum, humifusum, flore albo. Tourn. Cor.* Low trailing Greek Bastard Orpine, with a white Flower.

2. *TELEPHIOIDES Americanum, erectum, folio ovali subtus glauco, flore herbaceo.* Upright American Bastard Orpine, with an oval Leaf, which is of a Sea-green underneath, and an herbaceous Flower.

3. *TELEPHIOIDES Americanum, arborescens, fructu parvo, foliis acuminatis. Houst.* Tree-like American Bastard Orpine, with a small Fruit and pointed Leaves.

4. *TELEPHIOIDES Americanum, arborescens, foliis latis, subrotundis, & subtus incanis, fructu maximo. Houst.* Tree-like American Bastard Orpine, with broad roundish Leaves, which are hoary underneath, and the largest Fruit.

5. *TELEPHIOIDES Americanum, arborescens, foliis latioribus subrotundis, fructu majore, ex longo pediculo pendulo. Houst.* American Tree-like Bastard Orpine, with broader roundish Leaves, and a larger Fruit hanging on long Footstalks.

The first Sort was discovered by Dr. *Tournefort* in *Greece*; who constituted this Genus, giving it this Name from the Similitude there is between this Plant and the true Orpine of *Imperatus*. This is a low trailing Plant, which seldom continues more than two Years; it is propagated by Seeds, which should be sown in the Spring, on a Bed of fresh Earth, where they are designed to remain; and when the Plants are come up, they should be thinned where they are too close, leaving them about six Inches asunder; after this, they must constantly be kept clear from Weeds; in *July* the Plants will begin to flower, which are always produced behind the Leaves; and toward the latter End of *August* the Seeds will begin to ripen, and if they

they are not gathered as soon as ripe, the Pods will open and scatter them on the Ground, so that if they are not look'd after two or three times a Week, most of the Seeds will be drop'd; but the Plants will come up from these self-sown Seeds, and if they are kept clear from Weeds they will require no other Culture.

The second Sort grows plentifully in *Barbadoes*, *Jamaica*, and several other Places in the *West-Indies*, where the Seeds scatter themselves in such Plenty, that in the Earth which is brought from thence, the Plants frequently come up, especially if it be put on a Hot-bed, by which Method this Plant was first brought into *Europe*. This Sort grows erect, about two Feet high, and the Stem appears woody, but it seldom continues thro' the Winter, especially if it has produced Seeds; so that I believe it to be annual; for the Plants which arise in the Spring, flower about *Midsummer*, and the Seeds soon after ripen; so that if they are not frequently look'd after, they are soon scattered; but the Seeds which fall into the Pots which are near the Plants, will come up the following Spring; so that when once the Plant is obtained, and permitted to shed its Seeds, there will be little Danger of losing it, provided it is allowed a Place in the Hot-bed or the Stove, for it is too tender to thrive in the open Air in this Country.

The third Sort was discovered by the late Dr. *Houstoun*, at *La Vera Cruz*, from whence he sent the Seeds to *England*. This Sort rises to the Height of eight or ten Feet, having a woody Stem; the Leaves are branched into many Wings, and the Flowers, which are small and of a whitish green Colour, grow on the Under-side of the Leaves, and are succeeded by small Fruit, which hath not as yet ripened in *England*. The Leaves of this Plant fall off in Winter, and new ones come out the following Spring, so that for near four Months, the Plants are intirely destitute of Leaves.

The fourth and fifth Sorts were discovered by the late Dr. *Houstoun* at *Campechy*; where they grow to the Height of twelve or fourteen Feet. The Leaves of these Kinds are broad, and come out alternately on the Branches. The Fruit of the fifth Sort is about the Size of a small Nut, and is produced on the under-side of the Leaves, hanging on very long Footstalks. The Fruit of the fourth Sort is as large as Walnuts, and hath hard woody Coverings or Shells. There are but few of these Seeds which come to Maturity in the Countries of their Growth; for I have examined many of the Fruit of both Kinds, and have not found one in forty of them which had perfect Seeds in them; so that whoever collects their Seeds abroad, should throw them into Water, and take such of them only, as sink to the Bottom, for those which swim on the Surface of the Water, seldom have any Kernels in them.

These three Sorts are propagated by Seeds, (which must be procured from the Countries of their natural Growth, for they do not produce any Seeds in *England*) which should be sown on a Hot-bed early in the Spring, and when the Plants are come up, they should

be each transplanted into separate small Pots, filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark; being careful to shade them from the Sun every Day, until they have taken new Root; after which time they should have fresh Air admitted to them every Day, by raising the Glasses of the Hot-bed in proportion to the Warmth of the Season; and they must be frequently watered in hot Weather. In this Bed the Plants may remain till *Michaelmas*, when the Nights begin to be cold, at which time they should be removed into the Stove, and plunged into the Bark-bed; where, during the Winter Season, they must be kept very warm, otherwise they will not live in this Country. When the third Sort drops its Leaves, it should be watered sparingly, for if it hath too much Moisture during the time it is destitute of Leaves, it very often perishes. The fourth and fifth Kinds keep their Leaves throughout the Year; so these will require to be frequently refreshed with Water, especially if the Air of the Stove is kept warm. As these Plants are too tender to thrive in the open Air in this Country, even in the warmest Season of the Year, so they should be constantly kept in the Stove; and if they are continued in the Bark-bed, it will greatly promote their Growth. But in Summer, when the Weather is warm, they should have a large Share of fresh Air admitted to them, by opening the Glasses of the Stove; and if their Leaves should contract any Filth, they must be washed, otherwise it will retard the Growth of the Plants. When the Plants have filled the small Pots with their Roots, they should be shifted into Pots a little larger, which should be filled with fresh light Earth; observing whenever the Plants are shifted to trim their Roots; and if their Leaves should flag after being removed, it will be proper to shade them from the Sun for a few Days, until they have taken new Root. With this Management the Plants will thrive very fast, and in three Years will produce their Flowers, when they will afford an agreeable Variety, being mixed with other tender exotic Plants.

TELEPHIUM, Orpine, or Live-long.

The Characters are;

It hath a Rose-shap'd Flower, consisting of several Leaves placed orbicularly; out of whose many-leav'd Empalement, rises the Pointal, which afterward becomes a three-cornered Fruit, consisting of one Cell, which is filled with roundish Seeds. To these Notes should be added, that the Leaves are placed alternately on the Branches.

The Species are;

1. TELEPHIUM *Dioscoridis Imper.* The true Orpine of *Dioscorides*, according to *Imperatus*.
2. TELEPHIUM *Americanum*, portulacæ folio. *Inst. R. H.* American Orpine, with a Purslain-leaf.
3. TELEPHIUM *maritimum*, sedi folio, flore rubello. *Inst. R. H.* Maritime Orpine, with a Houseleek-leaf, and a red Flower.
4. TELEPHIUM *maritimum*, sedi folio, flore albo. *Inst. R. H.* Maritime Orpine, with a Houseleek-leaf, and a white Flower.

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very pernicious to them, especially to *Ranunculus's* and *Anemonies*; for in Beds thus prepared, I have lost more than half the Roots, and those which have lived, produced very weak Flowers; and upon taking up their Roots the following Summer, I have found them smaller than when they were planted; whereas in some adjoining Beds, which were prepared with rotten Neats-dung, the Roots have very few of them died, and have flowered very strong, and made a large Increase; tho' they were planted at the same Season, in the same Situation, and had equal Management. I have also found that rotten Tan is very prejudicial to Orange Trees, therefore it should never be mixed with the Earth which is designed for them, nor for any other Plants which require a cool loamy Soil; for nothing is more prejudicial to them than this Manure.

But altho' this rotten Tan is improper for Flowers, Orange Trees, and many other Plants in Gardens, yet it is an excellent Manure for strong cold Corn-land; and I have often been surpris'd to see in some Countries great Heaps of Tan lie neglected in Tanners-yards, when the neighbouring Farmers have fetch'd much worse Manure ten or fifteen Miles for their Land; whereas if they were once to try this, they would prefer it to most other Manures yet known.

TAPIA, The Garlick Pear-Tree

The Characters are;

It hath an Anomalous Flower, consisting of four Petals or Leaves, which stand erect; the lower Part being occupied by a Number of Chives; the Pointal, which is fixed on a long Footstalk, rises from the Center of the Empalement, and afterwards becomes a globular fleshy Fruit, in the Center of which are included many Seeds, which are shap'd almost like Kidney's.

We have but one Species of this Plant; viz.

TAPIA arborea triphylla. Plum. Nov. Gen. The Gallick Pear-Tree, vulgô.

The Name *Tapia* is what the Americans call this Tree; so Father *Plumier* has constituted it as a new Genus by the same Name. The English Inhabitants of America call it Garlick-Pear, from the Fruit having a very strong Scent of Garlick.

This Tree is pretty common in *Jamaica*, and several other Places in the warmer Parts of America, where it usually rises to the Height of thirty or forty Feet, and spreads into many Branches. During the dry Seasons, these Trees are usually destitute of Leaves, but when the Rains begin, they thrust out their Flowers at the Extremity of their Branches, and soon after the Leaves come out, which are of a dark green Colour, and are always three together on the same Footstalk. When the Flowers fall off, the Pointal becomes a round Fruit, about the Size of a Tennis-ball; which when ripe, has a rough brownish Rind, and a mealy sweetish Pulp, somewhat like some of the European Pears, but has a strong Scent of Garlick. This Fruit is often eaten by the Inhabitants of America, by way of Desert, tho' they are not very

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tempting. The Swine, which are sometimes fattened with this Fruit, have the strong Scent of Garlick communicated to their Flesh. These Trees generally grow on low moist Land in several Parts of America.

In Europe this Tree is preserved by some curious Persons who cultivate tender exotic Plants. It is propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with rich Earth, and then plunged into a moderate Hot-bed of Tanners-bark; observing to shade them from the Sun every Day, until they have taken new Root; after which time, they must be treated in the same Manner as hath been directed for the *Guanabanus*; with which Management, this Plant will thrive and make a Variety in the Stove, amongst other tender exotic Plants.

TELEPHIOIDES, Bastard Orpine.

The Characters are;

It hath a Rose-shap'd Flower, consisting of several Petals, which are constantly placed in a circular Order; from whose Empalement rises the Pointal, which afterward becomes a roundish Fruit, divided into six Cells, each containing a single Seed of the same Form with the Cell.

The Species are;

1. *TELEPHIOIDES Græcum, humifusum, flore albo. Tourn. Cor.* Low trailing Greek Bastard Orpine, with a white Flower.

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3. *TELEPHIOIDES Americanum, arborescens, fructu parvo, foliis acuminatis. Houst.* Tree-like American Bastard Orpine, with a small Fruit and pointed Leaves.

4. *TELEPHIOIDES Americanum, arborescens, foliis latis, subrotundis, & subtus incanis, fructu maximo. Houst.* Tree-like American Bastard Orpine, with broad roundish Leaves, which are hoary underneath, and the largest Fruit.

5. *TELEPHIOIDES Americanum, arborescens, foliis latioribus subrotundis, fructu majore, ex longo pediculo pendulo. Houst.* American Tree-like Bastard Orpine, with broader roundish Leaves, and a larger Fruit hanging on long Footstalks.

The first Sort was discovered by Dr. *Tournefort* in Greece; who constituted this Genus, giving it this Name from the Similitude there is between this Plant and the true Orpine of *Imperatus*. This is a low trailing Plant, which seldom continues more than two Years; it is propagated by Seeds, which should be sown in the Spring, on a Bed of fresh Earth, where they are designed to remain; and when the Plants are come up, they should be thinned where they are too close, leaving them about six Inches asunder; after this, they must constantly be kept clear from Weeds; in July the Plants will begin to flower, which are always produced behind the Leaves; and toward the latter End of August the Seeds will begin to ripen, and if they

they are not gathered as soon as ripe, the Pods will open and scatter them on the Ground, so that if they are not look'd after two or three times a Week, most of the Seeds will be drop'd; but the Plants will come up from these self-sown Seeds, and if they are kept clear from Weeds they will require no other Culture.

The second Sort grows plentifully in *Barbadoes*, *Jamaica*, and several other Places in the *West-Indies*, where the Seeds scatter themselves in such Plenty, that in the Earth which is brought from thence, the Plants frequently come up, especially if it be put on a Hot-bed, by which Method this Plant was first brought into *Europe*. This Sort grows erect, about two Feet high, and the Stem appears woody, but it seldom continues thro' the Winter, especially if it has produced Seeds; so that I believe it to be annual; for the Plants which arise in the Spring, flower about *Midsummer*, and the Seeds soon after ripen; so that if they are not frequently look'd after, they are soon scattered; but the Seeds which fall into the Pots which are near the Plants, will come up the following Spring; so that when once the Plant is obtained, and permitted to shed its Seeds, there will be little Danger of losing it, provided it is allowed a Place in the Hot-bed or the Stove, for it is too tender to thrive in the open Air in this Country.

The third Sort was discovered by the late Dr. *Houstoun*, at *La Vera Cruz*, from whence he sent the Seeds to *England*. This Sort rises to the Height of eight or ten Feet, having a woody Stem; the Leaves are branched into many Wings, and the Flowers, which are small and of a whitish green Colour, grow on the Under-side of the Leaves, and are succeeded by small Fruit, which hath not as yet ripened in *England*. The Leaves of this Plant fall off in Winter, and new ones come out the following Spring, so that for near four Months, the Plants are intirely destitute of Leaves.

The fourth and fifth Sorts were discovered by the late Dr. *Houstoun* at *Campechy*; where they grow to the Height of twelve or fourteen Feet. The Leaves of these Kinds are broad, and come out alternately on the Branches. The Fruit of the fifth Sort is about the Size of a small Nut, and is produced on the under-side of the Leaves, hanging on very long Footstalks. The Fruit of the fourth Sort is as large as Walnuts, and hath hard woody Coverings or Shells. There are but few of these Seeds which come to Maturity in the Countries of their Growth; for I have examined many of the Fruit of both Kinds, and have not found one in forty of them which had perfect Seeds in them; so that whoever collects their Seeds abroad, should throw them into Water, and take such of them only, as sink to the Bottom, for those which swim on the Surface of the Water, seldom have any Kernels in them.

These three Sorts are propagated by Seeds, (which must be procured from the Countries of their natural Growth, for they do not produce any Seeds in *England*) which should be sown on a Hot-bed early in the Spring, and when the Plants are come up, they should

be each transplanted into separate small Pots, filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark; being careful to shade them from the Sun every Day, until they have taken new Root; after which time they should have fresh Air admitted to them every Day, by raising the Glasses of the Hot-bed in proportion to the Warmth of the Season; and they must be frequently watered in hot Weather. In this Bed the Plants may remain till *Michaelmas*, when the Nights begin to be cold, at which time they should be removed into the Stove, and plunged into the Bark-bed; where, during the Winter Season, they must be kept very warm, otherwise they will not live in this Country. When the third Sort drops its Leaves, it should be watered sparingly, for if it hath too much Moisture during the time it is destitute of Leaves, it very often perishes. The fourth and fifth Kinds keep their Leaves throughout the Year; so these will require to be frequently refreshed with Water, especially if the Air of the Stove is kept warm. As these Plants are too tender to thrive in the open Air in this Country, even in the warmest Season of the Year, so they should be constantly kept in the Stove; and if they are continued in the Bark-bed, it will greatly promote their Growth. But in Summer, when the Weather is warm, they should have a large Share of fresh Air admitted to them, by opening the Glasses of the Stove; and if their Leaves should contract any Filth, they must be washed, otherwise it will retard the Growth of the Plants. When the Plants have filled the small Pots with their Roots, they should be shifted into Pots a little larger, which should be filled with fresh light Earth; observing whenever the Plants are shifted to trim their Roots; and if their Leaves should flag after being removed, it will be proper to shade them from the Sun for a few Days, until they have taken new Root. With this Management the Plants will thrive very fast, and in three Years will produce their Flowers, when they will afford an agreeable Variety, being mixed with other tender exotic Plants.

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The Characters are;

It hath a Rose-shap'd Flower, consisting of several Leaves placed orbicularly; out of whose many-leav'd Empalement, rises the Pointal, which afterward becomes a three-cornered Fruit, consisting of one Cell, which is filled with roundish Seeds. To these Notes should be added, that the Leaves are placed alternately on the Branches.

The Species are;

1. TELEPHIUM *Dioscoridis Imper.* The true Orpine of *Dioscorides*, according to *Imperatus*.
2. TELEPHIUM *Americanum*, portulacæ folio. *Inst. R. H.* American Orpine, with a Purslain-leaf.
3. TELEPHIUM *maritimum*, sedi folio, flore rubello. *Inst. R. H.* Maritime Orpine, with a Houseleek-leaf, and a red Flower.
4. TELEPHIUM *maritimum*, sedi folio, flore albo. *Inst. R. H.* Maritime Orpine, with a Houseleek-leaf, and a white Flower.

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The first Sort is a Native of *Italy, Spain,* and the southern Parts of *France*, from whence the Seeds have been procured by some Persons who are curious in Botany; who preserve it in their Gardens for the Sake of Variety. It is a low Plant, whose Branches trail on the Ground; the Leaves are small and roundish, of a glaucous Colour, and of a pretty thick Consistence. The Flowers are small, and of a whitish green Colour; so that the whole Plant makes but an ordinary Appearance.

This Sort may be propagated by Seeds, which should be sown early in the Spring, on a Bed of fresh light Earth, in an open Situation; and when the Plants are come up, they should be thinned, so as to leave them six or eight Inches asunder, and they must be constantly kept clear from Weeds; for if these are permitted to grow, they will soon overbear the Plants, and destroy them. In *June* they will begin to flower, and their Seeds will ripen in *August*; when they must be carefully watched to gather the Seeds, otherwise they will soon be scattered abroad; and if the Ground is not disturbed, the Plants will come up in Plenty, and require no other Care, than to keep them clear from Weeds.

The second Sort is a Native of *America*, from whence the Seeds have been brought to several curious Gardens in *Europe*. This is a tender Plant, so the Seeds should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with light fresh undunged Earth, and then plunged into a moderate Hot-bed of Tanners-bark; observing to shade them from the Sun in the middle of the Day for a little time, if the Weather should prove hot, until they have taken new Root; after which time they should have free Air admitted to them every Day, in proportion to the Warmth of the Season; and in hot Weather they must be frequently refreshed with Water; but as the Leaves and Branches are succulent, so they should not have too much Moisture, lest it rot them. In *July* the Plants will begin to flower, and in *September* the Seeds will ripen, and the Plants will perish soon after, for they are annual; so that if the Plants are not brought forward early enough in the Spring, they will not produce good Seeds in this Country.

The third Sort was brought from the *Cape of Good Hope*, where it grows in great Plenty near the Sea Side. The fourth Sort is a Variety of the third, only differing in the Colour of its Flower. These Sorts may be propagated by Seeds, which should be sown on a moderate Hot-bed in the Spring; and when the Plants are come up, they may be transplanted on another moderate Hot-bed, to forward their Growth; and when they are pretty strong, they should be each planted into a separate Pot filled with fresh Earth, and placed on a gentle Hot-bed, to forward their making new Roots; and in *June* they should be inured to bear the open Air by Degrees, into which they may be removed and placed in a warm Situation, amongst *Ficoides's* and other succulent Plants,

which are Natives of the same Country; where they may remain till *October*, when they should be removed into an airy Glass-case, where they may be treated in the same Manner as hath been directed for the *Ficoides's*; with which Management these Plants will thrive very well. These Plants may also be propagated by Cuttings, which may be taken from the old Plants during any of the Summer Months, and should be laid to dry for a few Days before they are planted, in the same Manner as is practised for other succulent Plants; then they may be planted in a Bed of light Earth, where they will soon take Root, and may be planted afterwards in Pots, and treated as the seedling Plants.

TEREBINTHUS, The Turpentine-tree.

To this Article must be added;

1. *TEREBINTHUS peregrina, fructu majore, pistaciis simile, eduli.* C. B. P. Foreign Turpentine-tree, with a larger eatable Fruit, like the Pistachia-nut.

2. *TEREBINTHUS peregrina, fructu minore & caeruleo, eduli.* C. B. P. Foreign Turpentine-tree, with a smaller blue eatable Fruit.

3. *TEREBINTHUS, seu pistachia trifolia.* Inst. R. H. The three leav'd Turpentine or Pistachia-tree.

4. *TEREBINTHUS Cappadocica.* H. R. Par. The Turpentine-tree of Cappadocia.

5. *TEREBINTHUS Americana, pistachia fructu non eduli.* Plum. American Turpentine-tree, with a Fruit like the Pistachia-nut, which is not eatable.

6. *TEREBINTHUS major, betulae cortice, fructu triangulari.* Sloan. Cat. The greater Turpentine-tree, with a Bark like the Birch-tree, and a triangular Fruit, commonly called in the *West-Indies* the Birch-tree.

The first, second, and third Sorts grow in the eastern Countries, where their Fruit is eaten, but they are at present very rare in *Europe*. The fourth Sort was originally brought from *Cappadocia*; the Fruit of this Sort is not eatable. These Trees may be propagated in the same Manner as hath been directed for the two Sorts which are enumerated in the former Volume of the *Gardeners Dictionary*; and should be treated in the same Manner as those afterwards, for they are equally hardy, so will thrive in the open Air, if they are planted in a warm Situation. I saw young Plants of all these Kinds, in the Garden of the late Dr. *Boerhaave* near *Leyden*, which were growing in the full Ground, and had resisted the Winters Cold very well.

The fifth and sixth Sorts grow plentifully in the Island of *Jamaica*, and in several other Places in the *West Indies*; where the fifth Sort is called the *Hog-Doctor* or *Boar-tree*, and the sixth Sort is called the *Birch-tree*. These Trees grow to the Height of thirty or forty Feet in the Places of their natural Growth, and have very large Trunks. The fifth Sort produces small purple Flowers, at the Extremity of the Branches, which generally appear before the Leaves come out; for the Trees are destitute of their Leaves a considerable Time. From

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From the Trunk and Branches of this Tree, there issues out a Balsam of the Consistence and Smell of Turpentine, which is greatly used by the Inhabitants to heal green Wounds.

The sixth Sort produces small purple Flowers at the Extremity of the Branches, which do generally precede the Leaves, like the other Sort; for the Leaves of this Tree fall off in November; and in February they put out new ones. The Trunk and Branches of this Tree being wounded, there flows out a liquid Balsam, which the Inhabitants call *Hoggum*, and make use of it to vomit or purge in chronic Diseases; the usual Dose is a Quarter of an Ounce for a strong Man, which is given in a Glass of Water, and will certainly vomit in a Quarter of an Hour after taking, without making the Person sick, or causing any Uneasiness. The Inhabitants of *Jamaica* confidently affirm, that when the wild Hogs are wounded, they will repair to these Trees, and rub against the Trunks till the Balsam flows out; when they rub their wounded Part on the Balsam, which cures them; which occasioned their calling it the *Hog-doctor-tree*.

These Trees may be propagated either by Seeds, or Cuttings; but the Seeds will not retain their growing Quality long, therefore they should be put into a Box of Earth soon after they are ripe, and when the Plants are come up, and have obtained Strength, they may be brought to *England*; but there should be great Care taken of them in their Passage, that they are not injured by salt Water; nor should they have much fresh Water given to them, especially as they come into a cooler Climate; for too much Moisture will soon destroy them. In like manner also should the Cuttings of these Trees be managed; for they should be planted in Tubs of Earth, and kept in the Country until they are well rooted; for if they are sent over before they have taken good Root, they seldom come good to *England*. When these arrive, they should be each transplanted into separate Pots, filled with fresh light Earth, and plunged into a moderate Hot-bed of Tanners-bark; observing if the Season is very warm, to shade them from the Sun in the Heat of the Day, and refresh them every other Day with Water, but do not give to them in great Quantities, lest it rot their tender Roots. When the Plants have taken good Root, and recovered the Injuries they received in their Passage, they may be treated in the same Manner as is practised for other tender exotic Plants, keeping them constantly in the Bark-stove; for they are too tender to live in the open Air in this Country. During the Winter Season, when they are destitute of Leaves, they should have but little Water; but in the Summer, when the Weather is warm, they may have frequent Refreshings, and a good Share of Air should be admitted to them at that Season. With this Management the Plants will thrive, and afford an agreeable Variety in the Stove, amongst other Plants of the same Country.

TERNATEA.

The Characters are;

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It hath a papilionaceous (or Pea-bloom) Flower, whose Standard almost hides the Keel and the Wings; the Pointal afterwards becomes a Pod, which opens two Ways; and is filled with Kidney-shap'd Seeds. To these Notes should be added, that the Leaves are winged, and are terminated by an odd Lobe.

The Species are;

1. *TERNATEA flore simplici, cœruleo. Acad. Reg. Scien.* Ternatea, with a single blue Flower.

2. *TERNATEA flore pleno, cœruleo. Acad. Reg. Scien.* Ternatea, with a double blue Flower.

3. *TERNATEA flore simplici albido. Acad. Reg. Scien.* Ternatea, with a single white Flower.

4. *TERNATEA Americana, perennis, flore cœruleo. Houst.* American perennial Ternatea, with a blue Flower.

The Name which Dr. *Tournefort* has given to this Genus of Plants is, from the Place whence these Plants were first brought, which is one of the *Molucca Islands*, called *Ternate*.

The three first-mentioned Sorts are annual Plants, which perish soon after they have perfected their Seeds. But the fourth Sort will abide several Years, provided the Plants are placed in a warm Stove. They are all of them tender Plants; so their Seeds should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with fresh light Earth, and then plunged into a moderate Hot-bed of Tanners-bark; observing to shade them from the Sun, until they have taken new Root, and often refresh them with Water. As these Plants have very slender Branches, so they twist round whatever Plants grow near them; therefore they should have Sticks thrust into the Pots, for them to twine round, that they may be supported from trailing on the Ground. In warm Weather these Plants should have a large Share of free Air admitted to them, otherwise they will draw up too weak; and when they are grown so tall, as to reach the Glasses of the Hot-bed, they should be taken out, and (after having shifted them into larger Pots) they should be plunged into the Bark-bed in the Stove, where they should remain to flower, and perfect their Seeds.

The Flowers of the first and second Sorts are of a very deep blue Colour, and if put in Water and macerated, will dye the Water almost as blue as *Indigo*. The second Sort, having very double Flowers, makes a fine Appearance when it is in Flower; so is worthy of a Place in every good Garden, where there is Conveniency for bringing them to Perfection. For as they are very tender, so if they are not brought forward early in the Spring, and carefully treated afterward, they will not perfect their Seeds in this Country.

The third Sort differs from the first, only in the Colour of the Flower, so may be admitted for the Sake of Variety, tho' the Flowers are not near so beautiful.

The fourth Sort was discover'd by the late Dr. *William Houstoun* in *Jamaica*, from whence

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he sent the Seeds to *England*. This is an abiding Plant, which rarely produces any Flowers in this Country; for from several of these Plants, which have been raised in the Physic-Garden; there has but one of them produced any Flowers as yet, and that not more than three Flowers, tho' it has remain'd several Years.

TETRAGONOCARPOS.

The Characters are;

It hath an apetalous Flower, whose Empalement is divided into four Parts; in the Middle of the Flower rises the Pointal, which afterwards becomes a Fruit, having four Wings, or Corners, and four Cells; in each of which is contain'd one Seed.

The Species are;

1. TETRAGONOCARPOS *Africana, fruticans, foliis longis & angustis. H. Amst.* African shrubby Tetragonocarpos, with long narrow Leaves.

2. TETRAGONOCARPOS *Africana, folio portulacæ longo, flore herbaceo Boerb. Ind. Alt.* African Tetragonocarpos, with a long Purslain-leaf, and an herbaceous Flower.

The first of these Plants is pretty common in the *English* Gardens, where there are Collections of rare Plants. This may be propagated by Cuttings, which should be cut off from the Plant a few Days before they are planted, that the Part where they are cut may be healed, otherwise they will rot; for the Leaves and Stalks of this Plant are very full of Moisture. The best Time to plant these Cuttings is in *July*, that they may have Time to make good Roots before Winter. These Cuttings may be planted on a Bed of fresh Earth; and if the Cuttings are shaded from the Sun in the Heat of the Day, it will be of Service to them. They should be frequently refreshed with Water; but they must not have it in too great Plenty, for that will rot them. In about six Weeks after Planting, the Cuttings will be sufficiently rooted to transplant; therefore they should be taken up, and planted into Pots, filled with light fresh undunged Earth, and placed in a shady Situation, until they have taken new Root; after which Time they may be placed with other hardy exotic Plants, in a shelter'd Situation, where they may remain till the Middle or latter End of *October*; at which Time they should be removed into the Green-house, and placed where they may enjoy as much free Air as possible in mild Weather; for they only require to be protected from the Frost, being pretty hardy with respect to Cold; but they should not have too much Moisture in Winter. If these Plants are planted in the full Ground in the Summer Season, they will grow prodigiously rank and large, as they also will, if they are permitted to Root into the Ground thro' the Holes at the Bottom of the Pots; therefore, the Pots should be frequently removed to prevent it; for when they grow too freely, their Leaves will be very full of Moisture; which, together with the Weight of the Fruit, which are always produced at the Extremity of the Branches, will weigh the Branches upon the

Ground, and render the Plants very unsightly. The Plants of this Kind commonly grow very straggling; therefore, the more their Roots are confined in the Pots, the more close and stunted will be the Heads of the Plants, which is what they should always be kept to, in order to render them sightly. The Flowers of this Plant have no great Beauty, but as the whole Face of the Plant is peculiar, so it may be allowed a Place in every Collection of Plants, for the Sake of Variety, since it requires no great Trouble to cultivate it.

This Plant may also be propagated by Seeds, which should be sown on a warm Border of light fresh Earth, where sometimes they will remain a whole Year before the Plants come up; therefore, when they do not come up the first Season, the Borders should not be disturbed, but kept constantly clear from Weeds; and when the Plants are come up about four Inches high, they should be taken up and planted in Pots, (and treated in the same Manner as hath been directed for the Cuttings) for if they are suffered to grow in the Border till they are large, they will not transplant so well, nor will they make so handsome Plants.

The second Sort is less common in the *English* Gardens than the former; but in some of the Gardens in *Holland*, it is in great Plenty. This may be treated in the same Manner as the first Sort, and is equally hardy.

TEUCRIUM, Tree-Germander.

To this Article must be added;

1. TEUCRIUM *Hispanicum, latiore folio. Inst. R. H.* Spanish-Tree-germander, with a broader Leaf.

2. TEUCRIUM *supinum, perenne, foliis laciniatis. Inst. R. H.* Low perennial Germander, with jagged Leaves.

3. TEUCRIUM *supinum, annuum, Lusitanicum, foliis laciniatis. Inst. R. H.* Low annual Portugal Germander, with jagged Leaves.

4. TEUCRIUM *frutescens, stæchadis Arabica folio & facie. Tourn. Cor.* Shrubby Germander, with the Leaf and Face of Arabian Stæchas.

5. TEUCRIUM *Orientale, latifolium, laciniatum, flore parvo. Tourn. Cor.* Broad jagged-leav'd Eastern Germander, with a small Flower.

6. TEUCRIUM *Orientale, angustifolium, laciniatum, flore magno, suave-rubente. Tourn. Cor.* Narrow jagged-leav'd Eastern Germander, with a large soft-red Flower.

7. TEUCRIUM *Orientale, angustifolium, laciniatum, flore magno, subcæruleo. Tourn. Cor.* Narrow jagged-leav'd Eastern Germander, with a large blue Flower.

8. TEUCRIUM *Hispanicum, supinum, humilius, verbenæ tenuifoliæ foliis jessieu.* Low trailing Spanish Germander, with Leaves like the narrow-leav'd Vervain.

9. TEUCRIUM *Creticum, odoratum, flore purpureo. H. R. Par.* Sweet Germander of Crete, with a purple Flower.

10. TEUCRIUM *Americanum, balicacabos & alopecuroides. Plum. Cat.* American-Tree-germander, like the Winter Cherry and Fox-tail.

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11. *TEUCRIUM Americanum, chamædryos folio, flore albo. Houst. American Tree-germander, with a common Germander-leaf, and a white Flower.*

The first Sort here-mentioned is very like to the *Batick Tree-germander*, which is mentioned in the former Volume of the *Gardeners Dictionary*: from which it differs in the Leaves being broader, the Shoots stronger, and the young Shoots being whiter. This Sort may be propagated by Cuttings, which may be planted during any of the Summer Months, in a Bed of fresh Earth; observing to shade them from the Sun until they have taken Root, as also to refresh them frequently with Water. When the Cuttings are well rooted, they should be carefully transplanted, some of them into Pots, that they may be shelter'd in Winter, and others on a warm dry Border, where they will endure the Cold of our ordinary Winters very well, without any Covering. These Plants, which are designed to live in the open Air, must be planted on a dry rubbishy Soil, in which they will grow more stunted, so will resist the Frost much better, than when they grow in a rich Soil, which causes them to be more luxuriant. Those Plants which are planted in Pots should be sheltered under a Hot-bed Frame in Winter; where they may have a greater Share of Air than in a Greenhouse; for the Glasses should not be put over them in mild Weather, these Plants only requiring to be protected from severe Frost.

The fourth and ninth Sorts are also shrubby Plants, which may be propagated, and treated in the same Manner as hath been directed for the first; with which Management these will thrive very well, and may be allowed to have a Place in the Garden, for the Sake of Variety.

The second Sort is a low trailing Plant, which puts out Roots from the Joints of the Stalks, whereby it may easily be propagated, as also from the Seeds, which require no farther Care, than to sow them on a Bed of fresh Earth, in an open Situation; and when the Plants are come up, they must be kept clear from Weeds; and where they are too close, some of them should be drawn out to give Room for the others to grow. This Sort will ripen Seeds very well in this Country; and, if planted in a warm Situation, will endure the Cold of our ordinary Winters very well.

The third, fifth, sixth, seventh, and eighth Sorts are annual Plants, of humble Growth. These are propagated by Seeds, which should be sown on a Bed of fresh Earth in *March*, and when the Plants are come up, they must be thinned where they are too close, and kept clear from Weeds, which is all the Culture they require; for as they are Plants which make no great Figure in a Garden, so they are not cultivated in great Plenty; a few Plants of each Sort, for the Sake of Variety, is as many as any curious Person commonly keeps. These Plants will drop their Seeds, and the Plants will come up from the self-sown Seeds, full as well, if not better, than when they are sown by Hand, so may be easily maintained.

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The tenth Sort was discovered by Father *Plumier*, in the *French Settlements in America*; and the eleventh was discovered by the late *Dr. Houstoun*, at the *Havannah*; from whence he brought the Seeds to *England*. These are both very tender Plants, so must be preserved in a Stove, otherwise they will not live thro' the Winter in this Country. They may be propagated by Seeds, which should be sown on a moderate Hot-bed in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot, filled with fresh light Earth, and then plunged into a moderate Hot-bed of *Tanners-bark*, and shaded from the Sun in the Heat of the Day, until they have taken new Root; after which Time they should have a large Share of free Air admitted to them in warm Weather, and must be plentifully watered. When these Plants are brought forward early in the Spring, some of them will produce their Flowers the same Season, but they rarely produce ripe Seeds the first Year; so the Plants should be removed into the Stove at *Michaelmas*, and during the Winter Season, should have a moderate Share of Heat, and will require to be frequently refreshed with Water; but it must not be given to them in large Quantities when the Weather is cold, for that will often occasion their Leaves falling off. These Plants, which are preserved thro' the Winter, will flower early the following Spring, and produce good Seeds; and the old Plants may be preserved three or four Years, if they are constantly kept in a Stove.

THALICTRUM, Meadow-rue.

To this Article must be added;

1. *THALICTRUM majus, filiquâ angulosâ aut striatâ. C. B. P. Greater Meadow-rue, with an angular furrowed Pod.*

2. *THALICTRUM pratense, majus, Monspelienfium, foliis rugosis. H. R. Par. Greater Montpellier Meadow-rue, with rough Leaves.*

3. *THALICTRUM majus, non striatum. C. B. P. Greater smooth Meadow-rue.*

4. *THALICTRUM majus, flavum, flaminibus luteis vel glauco folio. C. B. P. Greater yellow Meadow-rue, with yellow Chives, and a Sea green Leaf.*

5. *THALICTRUM magnum, flore luteo odorato Vir. Lust. Great Meadow-rue, with a yellow sweet Flower.*

6. *THALICTRUM minus, asphodeli radice, parvo flore. Inst. R. H. Smaller Meadow-rue, with an Asphodel-root, and a small Flower.*

7. *THALICTRUM minus, asphodeli radice, magno flore. Inst. R. H. Smaller Meadow-rue, with an Asphodel-root, and a large Flower.*

8. *THALICTRUM minus, C. B. P. Smaller Meadow-rue.*

9. *THALICTRUM pratense, angustifolium. C. B. P. Narrow-leav'd Meadow-rue.*

10. *THALICTRUM pratense, angustissimo folio. C. B. P. The narrowest leav'd Meadow-rue.*

11. *THALICTRUM minus, alterum, Parisiensium, foliis crassioribus & lucidis. H. R. Par. Another*

Another small Meadow-rue of *Paris*, with thicker shining Leaves.

12. *THALICTRUM minimum, foetidissimum*. C. B. P. The least and most stinking Meadow-rue.

13. *THALICTRUM montanum, minus, foliis latioribus*. Raij Syn. Small Mountain Meadow-rue, with broader Leaves.

14. *THALICTRUM minimum, montanum, atrorubens, foliis splendentibus*. Raij Syn. Smallest Mountain Meadow-rue, with blackish-red shining Leaves.

The first Sort here-mentioned grows plentifully in moist Meadows, in diverse Parts of *England*: The second Sort is found growing wild about *Newmarket*, and on chalky Grounds in several other Parts of *England*. The thirteenth and fourteenth Sorts, grow wild on the rocky Mountains of *Wales*, from whence they have been transplanted into some curious Gardens, where they are preserved for the Sake of Variety.

The other Sorts are not Natives of *England*, yet they are equally hardy with the former, so will thrive in the open Air very well. Most of these Plants have creeping Roots, by which they spread very far, and may be easily propagated; but they should not be planted amongst other better Plants, because these will overbear and destroy them. These Plants should be planted in a moist Soil, otherwise they will not flower very strong. The best Time to transplant them, is about *Michaelmas*, that they may be well rooted before the dry Weather comes on in the Spring.

The first, second, third, fourth, fifth, ninth, and tenth Sorts, are tall Plants, so may be planted amongst other Plants of the same Growth, which delight in a moist Soil, in some obscure Part of the Garden, where better things will not thrive; in which Places these will thrive and flower, and maintain themselves without any other Care, but to keep them clear from very large Weeds, which would overbear and destroy them.

The other Sorts are of humble Growth, some of them seldom rising above six Inches high, and the others not more than a Foot; so these may be planted in shady Borders with other hardy Plants, where they will thrive very well, provided they are watered in dry Weather, and will abide several Years. All these Sorts do flower in *May* and *June*, and their Seeds are ripe toward the end of *August*. But as these do propagate so fast by their Roots, so they are rarely raised from Seeds, which is a more tedious Method, for it is commonly three Years before the seedling Plants produce their Flowers so strong as the old ones.

THAPSIA, Scorching-fennel, or Deadly-carrot.

The Characters are;

It hath an umbellated Rose-shap'd Flower, consisting of five Petals, which are placed in a circular Order, and rest on the Empalement, which afterwards become a Fruit, composed of two long furrowed Seeds, which have a large leafy Border.

The Species are;

1. *THAPSIA maxima, latissimo folio*. C. B. P. The greatest Scorching-fennel, with a very broad Leaf.

2. *THAPSIA latifolia, villosa*. C. B. P. Broad-leav'd hairy Scorching-fennel.

3. *THAPSIA foliis Libanotidis, foetidissima*. C. B. P. The most stinking Scorching-fennel, with Herb-Frankincense-leaves.

4. *THAPSIA apii folio, Lusitanica, foetidissima, flore albo*. Inst. R. H. The most stinking Portugal Scorching-fennel, with a Smallage-leaf, and a white Flower.

5. *THAPSIA tenuiore folio, Apula*. Inst. R. H. Apulian Scorching-fennel, with a narrow Leaf.

6. *THAPSIA, five Turbith Garganicum, semine latissimo*. J. B. Scorching-fennel, with very broad Seeds, whose Roots were supposed to be the *Turbith*.

7. *THAPSIA Alpina, lucida, Thalictri aut Carotæ folio, flore albo*. Bocc. Mus. Shining Scorching-fennel of the Alps, with a Meadow-rue or Carrot-leaf, and a white Flower.

8. *THAPSIA Thalictri folio, Lusitanica, villosa*. Inst. R. H. Hairy Portugal Scorching-fennel, with a Meadow-rue-leaf.

9. *THAPSIA Orientalis, Anethi folio, semine elegantior crenato*. Tourn. Cor. Eastern Scorching-fennel, with a Dill-leaf, and Seed beautifully notched.

10. *THAPSIA Orientalis, aquatica, Angelicæ folio*. Tourn. Cor. Eastern Water Scorching-fennel, with an Angelica-leaf.

11. *THAPSIA Cretica, Thalictri folio, villosa, seminum alis purpureo violaceis*. Tourn. Cor. Hairy Scorching-fennel of Crete, with a Meadow-rue-leaf, and Seeds with purple Violet Borders.

12. *THAPSIA Carotæ folio*. C. B. P. Scorching-fennel, with a Carrot-leaf.

The first Sort grows plentifully in several Parts of *Spain*, and on the *Pyrenees*, where the Inhabitants sometimes use the Roots in Medicine; but it purges upwards and downwards, with so much Violence, that it frequently puts those who take it in great Hazard of their Lives.

The sixth Sort, whose Roots have by some Botanists been supposed to be the *Turbith* of the Shops, grows on the Coast of *Africa*; from whence the Seeds have been brought into several curious Gardens in *Europe*, where the Plant is preserved by those who delight in Botany.

The twelfth Sort is mentioned in the Catalogue of Plants inserted in the College Dispensatory, but is rarely used in Medicine; for it is of such an acrid burning Quality, that it is very dangerous to take inwardly; but outwardly applied, it takes of Blemishes and Scabs from the Skin.

All these Plants are very hardy with respect to Cold, so that they will thrive in the open Air in this Country; but they should have a loamy Soil, and in dry Weather should be watered, otherwise their Flowers will fall off, without producing good Seeds. These Plants are only propagated by Seed, which should be sown

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sown in Autumn; for if they are kept out of the Ground till Spring, they often miscarry; or if they do grow, they commonly lie in the Earth a whole Year before the Plants come up; whereas those Seeds which are sown in Autumn, generally grow the following Spring. These should be sown in Drills, in the Place where they are designed to remain; the Drills should be at least two Feet asunder, because the Plants spread their Leaves very wide. When the Plants come up in the Spring, they must be carefully clear'd from Weeds; and where they are too close together, some of them should be drawn out, to give Room for the others to grow; but at this time they need not be left more than two or three Inches apart. For the first Year the Plants arise from Seeds, they make but slow Progress; so the Autumn following, the remaining Part of the Plants may be taken up, leaving those which are designed to remain, about eighteen Inches asunder; and those Plants which are taken up, may be transplanted into another Bed, if they are wanted. After the first Year these Plants will require no farther Care, but to keep them clear from Weeds; and every Spring, just before the Plants begin to push out new Leaves, the Ground should be carefully dug between the Plants to loosen it; but the Roots must not be injured, lest it should cause them to decay. The Plants being thus managed, will continue several Years, and produce Flowers and Seeds annually, from which new Plants may be raised.

THLASPI, Treacle-mustard.

To this Article must be added;

1. THLASPI *arvense*, *vaccariae incano folio*. C. B. P. Common Mitbridade-mustard.
2. THLASPI *vaccariae incano folio*, *minus*. C. B. P. Small hoary-leav'd Mitbridade-mustard.
3. THLASPI *capsulis hirsutis*. J. B. Mitbridade-mustard, with hairy Pods.
4. THLASPI *capsula cordata*, *peregrinum*. J. B. Foreign Mitbridade-mustard, with a heart-shaped Pod.
5. THLASPI *allium redolens*. Mor. Hist. Mitbridade-mustard, smelling like Garlick.
6. THLASPI *arvense perfoliatum majus*. C. B. P. Greater field Mitbridade-mustard, with thorough-wax Leaves.
7. THLASPI *perfoliatum minus*. C. B. P. Smaller thorough wax-leav'd Mitbridade-mustard.
8. THLASPI *parvum saxatile*, *flore rubente*. C. B. P. Small rock Mitbridade-mustard, with a reddish Flower.
9. THLASPI *Alpinum*, *folio rotundiore carnosio*, *flore purpurascete*. Inst. R. H. Mitbridade-mustard of the Alps, with a rounder fleshy Leaf, and a purplish Flower.
10. THLASPI *minimum Lusitanicum*, *cochleariae folio*. Inst. R. H. The least Portugal Mitbridade-mustard, with a scurvy-grass Leaf.
11. THLASPI *Alpinum minimum*, *foliis crassis & angustis*. Inst. R. H. The least Mitbridade-mustard of the Alps, with narrow fleshy Leaves.

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12. THLASPI *Lusitanicum umbellatum*, *gramineo folio*, *flore purpurascete & albo*. Inst. R. H. Portugal Mitbridade-mustard, with a Grass-leaf, and purplish or white Flowers, growing in an Umbel.

13. THLASPI *Oriente saxatile*, *flore rubente*, *foliis polygalæ*, *petalis florum æqualibus*. Tourn. Cor. Eastern rock Mitbridade-mustard, with Milkwort-leaves, and reddish Flowers, whose Petals are equal.

14. THLASPI *Oriente tenuifolium canescens*, *flore albo*. Tourn. Cor. Eastern Mitbridade-mustard, with narrow Leaves, which are hoary, and a white Flower.

15. THLASPI *Oriente glabrum*, *samolii foliis*. Tourn. Cor. Smooth eastern Mitbridade-mustard, with Samolus-leaves.

16. THLASPI *Oriente*, *folio cynocrambes*, *flore minimo*. Tourn. Cor. Eastern Mitbridade-mustard, with a Dogs-mercury-leaf, and a very small Flower.

17. THLASPI *Virginianum*, *foliis Iberidis amplioribus & serratis*. Inst. R. H. Virginia Mitbridade-mustard, with Leaves like the Scitica-cress, which are broader, and sawed on their Edges.

18. THLASPI *montanum sempervirens*. C. B. P. Evergreen Mountain Mitbridade-mustard.

19. THLASPI *Oriente fruticosum*, *scammonii Monspelienfis folio*. Tourn. Cor. Shrubby eastern Mitbridade-mustard, with the Leaf of Montpellier Scammony.

20. THLASPI *foliis globulariæ*. J. B. Treacle-mustard, with Leaves like Globulariæ.

The first Sort grows plentifully wild amongst the Corn, and by the Sides of Hedges, in most Parts of England. The Seeds of this Sort are generally sold by the Druggists in London, for the true Mitbridade-mustard; but the first Sort, which is mentioned in the former Volume of the *Gardeners Dictionary*, is what the College of Physicians have directed to be used in the *Tberiacæ*.

The second, third, seventh and twentieth Sorts, do also grow wild in some Part of Great Britain, but are not so common as the former Sort, especially the twentieth; which is found in the mountainous Pastures in *Torkshire*, and some other Places in the North; but is not to be met with in the South, unless in some curious Botanic Gardens; where it is preserved for the sake of Variety.

The seventeen first-mentioned Sorts are all of them annual Plants, which, if permitted to shed their Seeds on the Ground, will succeed much better than when sown by Hand, especially if they are not sown in Autumn; for when the Seeds are sown in the Spring, if the Season should prove dry, they seldom grow; and if they do come up, the Plants will be very small, and produce little Seed; whereas those Plants which come up in Autumn, will abide the Winter's Cold very well, and the following Spring will get Strength before the hot Weather comes in; so will flower, and produce plenty of Seeds.

Some of these Sorts do produce pretty Flowers growing in Clusters, which renders them

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them worthy of a Place in large Gardens, where there is room for Variety, especially as they require very little Trouble to cultivate them. For none of these Sorts should be transplanted, but sown where they are designed to remain; and if they are kept clear from Weeds, it is all the Culture they require. Many of these Plants will grow on the Top of old Walls, or other Buildings; where they will shed their Seeds, and maintain themselves without Care; and growing very low and stunted, will produce a great Number of Flowers; so will make a pretty Appearance in the Spring, when they are in Flower.

The eighteenth Sort is an abiding Plant, which continues always green, and flowers a long time. The Flowers of this Kind grow in Umbels at the Extremity of the Shoots, which resemble those of the *Candy-tuft Tree*, but are smaller. The Leaves of this Sort are narrow and pointed; and the whole Plant seldom rises above six Inches high. This Sort seldom produces good Seeds in *England*, but may be propagated by Cuttings, which should be planted in a shady Border, during any of the Summer Months; and in dry Weather they must be frequently watered. When these are well rooted, they may be transplanted where they are designed to remain, which should be on a dry rubbishy Border; where they will thrive and flower much better than in a rich Soil. This Plant is hardy enough to endure the Cold of our ordinary Winters very well in the open Air; but in very severe Frosts they are sometimes destroyed; for which Reason, it will be proper to have a few Plants in Pots, which may be sheltered in Winter, in order to preserve the Kind.

The nineteenth Sort was discovered by Dr. *Tournefort*, in the *Levant*; this Plant grows to the Height of two Feet or more, and becomes shrubby. The Flowers of this Kind are small, so do not make a very good Appearance; but the Plant is preserved by some curious Persons, for the sake of Variety. This Sort may be propagated by Cuttings during any of the Summer Months, in like manner as the last-mentioned, but is somewhat tenderer; so these, when they are rooted, should be planted in Pots, and sheltered in Winter, in the same Manner as hath been directed for the *Candy-tuft-tree*, in the former Volume of the *Gardeners Dictionary*.

THLASPIDIUM, Bastard *Mithridate-mustard*.

To this Article must be added;

1. **THLASPIDIUM** *Monspeliense, hieracii folio birsuto*. *Inst. R. H.* *Montpelier* Thlaspidium, with a hairy hawk-weed Leaf.

2. **THLASPIDIUM** *birsutum, calyce floris auriculato*. *Inst. R. H.* Hairy Thlaspidium, with an eared Flower-cup.

3. **THLASPIDIUM** *annuum, flore pallide ru- teo*. *Inst. R. H.* Annual Thlaspidium, with a pale yellow Flower.

4. **THLASPIDIUM** *raphani folio*. *Inst. R. H.* Radish-leav'd Thlaspidium.

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5. **THLASPIDIUM** *anchusæ folio*. *Inst. H. R.* Alkanet-leav'd Thlaspidium.

6. **THLASPIDIUM** *Apulum spicatum*. *Inst. R. H.* Spiked Thlaspidium of *Apulia*.

7. **THLASPIDIUM** *montanum angustifolium glabrum*. *Inst. R. H.* Smooth narrow-leav'd mountain Thlaspidium.

8. **THLASPIDIUM** *Alpinum pumilum aspe- rum*. *Inst. R. H.* Low rough Thlaspidium of the *Alps*.

9. **THLASPIDIUM** *Apulum incanum, floribus ex albo purpurascens*. *Inst. R. H.* Hoary Thlaspidium of *Apulia*, with white purplish Flowers.

10. **THLASPIDIUM** *Hispanicum, ampliore flore, folio crasso dentato*. *Hort. Elth.* Spanish Thlaspidium, with a large Flower, and a thick indented Leaf.

The first Sort here-mentioned, is an abiding Plant of humble Growth, seldom rising above six Inches high. This is very common in the South of *France, Italy, Sicily, and Spain*, where it usually flowers in *May* and *June*; and the Seeds are ripe in *July*. In *England* this Plant is preserved by some curious Persons, for the sake of Variety; tho' there is no great Beauty in its Flowers. They are hardy enough to endure the Cold of our Winters in the open Air, provided they are sown on a dry rubbishy Soil; for if they are sown on a rich moist Soil, they grow so rank in Summer, that the first Frost in Autumn usually destroys them. These Plants do not bear transplanting very well; so they should be sown where they are designed to remain, and thin them where they come up too close, leaving the Plants about six or eight Inches asunder; and then, if they are kept clear from Weeds, it is the only Culture they require. Some of these Plants will flower the same Season they are sown; but unless the Autumn proves dry and warm, they seldom produce good Seeds; therefore the surest Method is to sow the Seeds in Autumn, when the Plants will come up, and abide the Winter; so will flower early the following Summer, and the Seeds will come to Perfection.

The second Sort will sometimes live two Years, if it grows on a lean dry Soil; but if this is sown in Autumn, as the former Sort, it will flower, and produce good Seeds.

The third, fourth, fifth, sixth, seventh, eighth and ninth Sorts, are all of them annual Plants; these should be also sown about the Middle of *August*, on a dry poor Soil in a warm Situation, where the Plants will abide the Cold of our Winters very well, and will flower early the following Spring, so that good Seeds may be obtain'd from them. These Seeds, if they are permitted to scatter, will come up and thrive without any farther Care, but to keep them from being over-run with Weeds; therefore may be allowed a Place on dry rubbishy Borders, or on old Walls or Ruins, where they will flower, and make an agreeable Variety.

The tenth Sort produces large fair Flowers, which continue a long time in Beauty; so is worthy of a Place in every good Garden.

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This Sort is at present very rare in the *English* Gardens; but as it may be easily propagated by Cuttings in the same manner as the *Candy-tuft-tree*, so it may be treated as hath been directed in the former Volume of the *Gardeners Dictionary* for that Sort; with which Management these Plants will thrive and flower extremely well.

THYMBRA.

The Characters are;

It hath a labiated Flower, like those of Savory, Thyme, and Calaminth, from which this Plant differs, in having its Flowers growing in Whorles.

The Species are;

1. *THYMBRA legitima. Clus. Hist.* The true Thymbra of *Clusius*.

2. *THYMBRA Hispanica, coridis folio. Inst. R. H.* Spanish Thymbra, with a fair Heath-pine-leaf.

3. *THYMBRA Sancti Juliani, five Satureja vera. Lob. Icon.* Thymbra of Mount Saint Julian, or the true Savory of *Lobel*.

The first Sort rises about two Feet high, and hath a woody Stem, and divides into many Branches, so as to form a small Bush; the Leaves of this Plant are somewhat like those of Savory, and have a strong aromatic Scent when bruised. This Sort grows plentifully in several Islands of the *Archipelago*, from whence the Seeds were sent to several curious Persons, who cultivate it for the sake of Variety. This Kind may be propagated by Cuttings, which should be planted in the Beginning of *April*, on a Border, where they may have only the morning Sun; and in dry Weather they must be constantly watered, until they have taken good Root; after which time, they will require no farther Care, but to keep them clear from Weeds, till *Michaelmas*, at which time the Plants should be carefully taken up and transplanted, some of them into Pots, that they may be shelter'd in Winter, and the others on a dry lean Soil in a warm Situation, where they will endure the Cold of our ordinary Winters very well; but in severe Winters they are frequently destroyed; therefore it is proper to preserve two or three Plants in Pots under Shelter, lest those in the open Air should be killed.

The second Sort was discovered by Dr. *Tournefort* in *Castile*, where it grew plentifully on stony Ground. This is a low ever-green bushy Plant, somewhat like *Thyme*; but the Leaves are broader, and the whole Plant has a more dull and somewhat foetid Smell. This may be propagated by Seeds, or by Cuttings as the former Sort, and should be treated in the same manner.

The third Sort grows in several Places in *Italy* and *Sicily*, commonly on stony Land, or on old Walls. This is a low Plant, seldom rising above six Inches high, sending forth many upright Branches from the Root, which have Spikes of small Flowers, growing in Whorles on their Tops. This Sort is propagated by Seeds, which should be sown on a light lean Soil; and when the Plants are strong

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enough to transplant, some of them should be planted in Pots to be shelter'd in Winter, and the others may remain where they were sown, observing to keep them clear from Weeds, which is all the Culture they require. This Sort seldom continues longer than two or three Years, so that Seeds should be sown every other Season to raise a Supply of young Plants.

These Plants are supposed to have the same Virtues as *Savory*, to which they are nearly allied.

Most of the aromatic verticillate Plants will endure the Cold of the most severe Winters in *England*, provided they grow on rocky stony dry Ground, where they will be short and stunted; and are also much stronger scented, than when they are sown or planted on a richer Soil; nay, most of them will grow on old Walls and Buildings, where they will root into the Joints between the Stones or Bricks; and tho' they are exposed to the severest Winds, yet will they resist the Cold, when the Plants of the same Kinds, which are in the warmest Situations of the Garden, have been intirely destroyed. Of this there have been several Instances within the Memory of several Persons now living, when all the *Rose-mary*, and many other of the like aromatic Herbs, have been destroyed in the Gardens; when some few Plants, which were growing on old Walls, have escaped; whereby their Species have been preserved in *England*.

THYMELEA, Spurge-laurel.

To this Article must be added;

1. *THYMELEA foliis lini. C.B.P.* Spurge-olive, or Laurel with Flax-leaves.

2. *THYMELEA Alpina linifolia humilior, flore purpureo odoratissimo. Inst. R. H.* Dwarf Spurge-laurel of the *Alps*, with a Flax-leaf, and a very sweet purple Flower.

3. *THYMELEA Alpina linifolia humilior, flore albo odoratissimo. Inst. R. H.* Dwarf Spurge-laurel of the *Alps*, with a Flax-leaf, and a very sweet white Flower.

4. *THYMELEA villosa minor Lusitanica, polygoni folio. Inst. R. H.* Smaller hairy Portuguese Spurge-laurel, with a Knot-grass-leaf.

5. *THYMELEA linariæ folio, vulgaris. Inst. R. H.* Common Spurge-laurel, with a Toad-flax-leaf.

6. *THYMELEA linariæ folio, Hispanica. Inst. R. H.* Spanish Spurge-laurel, with a Toad-flax-leaf.

7. *THYMELEA latifolia Hispanica, oleæ foliis. Inst. R. H.* Broad-leav'd Spanish Spurge-laurel, with Olive-leaves.

8. *THYMELEA argentea Italica, oleæ foliis. Inst. R. H.* Silvery Italian Spurge-laurel, with Olive-leaves.

9. *THYMELEA saxatilis, oleæ folio. Inst. R. H.* Rocky Spurge-laurel, with an Olive-leaf.

10. *THYMELEA Alpina, folio utrinque incano, flore albo. Inst. R. H.* Alpine Spurge-laurel, with a Leaf hoary on both Sides, and a white Flower.

11. *THYMELEA foliis polygalæ glabris. C.B.P.* Spurge-laurel, with smooth Milkwort-leaves.

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12. *THYMELÆA foliis polygalæ villosis*. Inst. R. H. Spurge-laurel, with hairy Milkwort-leaves.

13. *THYMELÆA foliis chamelææ minoribus subbirsutis*. C. B. P. Spurge-laurel, with smaller Widow-wail-leaves, which are somewhat hairy.

14. *THYMELÆA Hispanica, foliis myrti incanis*. Inst. R. H. Spanish Spurge-laurel, with hoary Myrtle-leaves.

15. *THYMELÆA Pyrenaica juniperifolia, ramulis surrectis*. Inst. R. H. Pyrenean Spurge-laurel, with a Juniper-leaf, and upright Branches.

16. *THYMELÆA foliis candicantibus, serici instar mollibus*. C. B. P. Spurge-laurel, with whitish soft Leaves resembling Silk.

17. *THYMELÆA Cretica, oleæ folio, subtus villosa*. Tourn. Cor. Spurge-laurel of Crete, with an Olive-leaf, hairy underneath.

18. *THYMELÆA Cretica, oleæ folio utrinque glabro*. Tourn. Cor. Spurge-laurel of Crete, with an Olive-leaf, smooth on both Sides.

19. *THYMELÆA Pontica, citrei foliis*. Tourn. Cor. Pontic Spurge-laurel, with Citron-leaves.

20. *THYMELÆA orientalis minima, laureolæ folio, floribus glomeratis albis*. Tourn. Cor. The least eastern Spurge-olive, with the common Spurge-laurel-leaves, and white Flowers growing in Clusters.

21. *THYMELÆA orientalis, buxi folio subtus villosa, flore albo*. Tourn. Cor. Eastern Spurge-laurel, with a Box-leaf, hairy on the Under-side, and a white Flower.

22. *THYMELÆA orientalis, salicis folio, flore albo odoratissimo*. Tourn. Cor. Eastern Spurge-laurel, with a Willow-leaf, and a white sweet-scented Flower.

23. *THYMELÆA linifoliæ similis, Africana, floribus pallidis odoratissimis*. Prod. Par. Bat. African Spurge-laurel like the first Sort, with pale sweet-scented Flowers.

24. *THYMELÆA linifoliæ similis, Africana, foliis lucidis, latioribus & obtusis*. Par. Bat. African Spurge-laurel like the first Sort, with broader shining and obtuse Leaves.

25. *THYMELÆA Africana, foliis lini, floribus in capitulum congestis*. Oldenl. African Spurge-laurel, with Flax-leaves, and Flowers collected in Heads.

26. *THYMELÆA Africana, rorismarini folio angustissimo breviori*. Oldenl. African Spurge-laurel, with a very narrow and shorter Rosemary-leaf.

27. *THYMELÆA Africana, rorismarini folio angustissimo longiori*. Oldenl. African Spurge-laurel, with a very narrow and longer Rosemary-leaf.

28. *THYMELÆA Africana, rorismarini folio, floribus longioribus*. Oldenl. African Spurge-laurel, with a Rosemary-leaf, and longer Flowers.

29. *THYMELÆA Africana, sanamundæ facie, ericæ foliis angustissimis*. Prod. Par. Bat. African Spurge-laurel, with the Face of Sana-munda, and very narrow Heath-leaves.

30. *THYMELÆA Africana Tarton-Zaire similis, floribus in capitulum congestis*. Oldenl. Afri-

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can Spurge-laurel, like the Tarton-zaire, with Flowers collected in a Head.

31. *THYMELÆA Africana, foliis rusci*. Oldenl. African Spurge-laurel, with Butchers-broom-leaves.

32. *THYMELÆA Africana frutescens, jasmini flore, foliis polygalæ*. Oldenl. African shrubby Spurge-laurel, with a Jasmine-flower, and Leaves of Milkwort.

33. *THYMELÆA Capensis, nepæ Theophrasti foliis aculeatis, flore parvo purpureo*. Pluk. Phyt. Spurge-laurel of the Cape of Good Hope, with prickly Furz-leaves, and a small purple Flower.

34. *THYMELÆA Americana frutescens, rorismarini folio, flore albo*. Plum. Shrubby American Spurge-laurel, with a Rosemary-leaf, and a white Flower.

The sixteen Sorts which are first-mentioned, grow wild in Germany, Austria, Bohemia, on the Alps, in Spain, Portugal, or the South of France, as they are particulariz'd in their Names: these Plants will live in the open Air in England, provided they are planted in a warm Situation.

The seventeenth, eighteenth, nineteenth, twentieth, twenty-first and twenty-second Sorts, were discovered by Dr. Tournefort in the Levant; from whence some of these Plants have been obtained, and are preserved in curious Botanic Gardens for Variety. These Sorts are also pretty hardy, so will endure the Cold of our ordinary Winters very well in the open Air, provided they are placed in a shelter'd Situation. All these Plants are propagated by Seeds, which should be sown in the Autumn as soon as they are ripe; for if they are kept out of the Ground till Spring, they seldom succeed; and if any of them do grow, they will remain in the Ground a whole Year, before the Plants come up. These Seeds should be sown on a shady Border, where they may only enjoy two or three Hours of the morning Sun, and the Soil should be cool and loamy; in dry Weather they must be duly water'd, and when the Plants are come up, they should be constantly kept clean from Weeds. In this Border the Plants should remain till Michaelmas, at which Time a fresh Border of loamy Earth should be prepared to receive the Plants, which should also be in a shady Situation; then the Plants should be carefully taken up out of the Seed-bed, and planted in Rows about six or seven Inches asunder, and about four Inches distance from each other in the Rows. When these Plants have taken new Root, they will require no farther Care, but to keep them clear from Weeds, and in dry Weather to refresh them now and then with Water, which will promote their Growth. If these Plants thrive well, they will be large enough to transplant by the following Michaelmas, into the Places where they are designed to remain; which should always be on a pretty strong loamy Soil, rather moist than dry; and if it be under Cover of Trees, provided they are not too much overhung, they will thrive better than in an open Situation, where they are exposed to the Sun.

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These Plants continue green throughout the Year, which renders them worthy of a Place in good Gardens; where, if they are rightly disposed, they will afford an agreeable Variety. Most of these are low Shrubs, which seldom rise above two or three Feet high, so are very proper to plant under Trees to fill up the Vacancies, where they will have a good Effect. The Seeds of the first Sort are used in Medicine, so that the Plants of this Kind are preserved in Physic Gardens, but they make the meanest Appearance of all the Sorts.

The twelve Sorts which are last-mentioned, are much tenderer than the former. All of these (except the last) grow near the *Cape of Good Hope*; from whence several of them have been brought into the *European* Gardens. These Plants may also be propagated by Seeds, but as they very rarely produce their Seeds in *England*, so they are commonly propagated by laying down of their Branches; which, if rightly managed, will take Root in one Year. The best time to lay down the Branches is in the Beginning of *April*; the Branches which are chosen to make Layers, should be of the former Year, or at most but two Years old; these should be a little twisted at the Part which is laid in the Ground, which will cause them to root the sooner: in dry Weather they must be duly watered, otherwise the Shoots will harden, which will prevent their putting out Roots. By the *April* following they will be rooted, when they may be cut off from the old Plants, and each planted into a small Pot, filled with fresh Earth; and if they are plunged into a very moderate Hot-bed, it will forward their taking new Root. These must be screen'd from the Sun every Day till they are rooted; after which time they must be inured to bear the open Air by degrees; and in the middle of *May*, they should be placed abroad in a shelter'd Situation, where they will make an agreeable Variety amongst other exotic Plants.

These Plants must be removed into the Green-house in Autumn, and placed where they may enjoy as much free Air as possible in mild Weather, but they must be protected from Frost. During the Winter Season they must be frequently refreshed with Water, for they are pretty thirsty Plants; but in very cold Weather it must be given to them sparingly. In Summer they must be placed abroad with the *Geranium's*, *Alaternoides's*, and other Plants of the same Country, and treated in the same manner as hath been directed for those; with which Management they will thrive very well. The Flowers of these Plants, being very small, do not afford any great Pleasure, but for the singular Oddness of the Leaves and Branches. These Plants deserve a Place in good Green-houses, for the sake of Variety.

The last Sort is more tender than any of the rest, this being a Native of the warmer Parts of *America*. This was discovered by Father *Plumier*, in some of the *French* Settlements in *America*; and hath been observed growing in great Plenty, at the *Havannah*,

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by the late *Dr. William Houstoun*, who sent the Seeds to *England*: it was also found by *Mr. Robert Millar* at *Campechy*, who also sent the Seeds to *England*; from which many Plants have been raised.

The Seeds of this Plant should be sown in Pots of fresh Earth, and then plunged into a moderate Hot-bed of *Tanners-bark*; observing frequently to water the Pots, to keep the Earth moist, which will bring up the Plants in about six Weeks time. When these Plants are about two Inches high, they should be shaken out of the Seed-pots, and each planted in a small Pot filled with fresh loamy Earth; and then plunged into a moderate Hot-bed of *Tanners-bark*, where they must be shaded from the Heat of the Sun, until they have taken new Root; after which time they must be treated after the same manner as hath been directed for other exotic Plants, which are the Produce of the hottest Countries.

In this Hot-bed the Plants may remain till about *Michaelmas*, when the Nights will begin to be too cold for these Plants; therefore they should be removed into the Stove, and plunged into the Bark-bed. During the Winter Season these Plants must be kept very warm, especially while they are young, because they make but little Progress the first Year; and if they are stunted the first Winter, they do not recover it in a long time after. These Plants should constantly remain in the Stove, and should be treated in the same manner as hath been directed for the *Suriana*.

TITHYMALUS, Spurge.

To this Article must be added;

1. TITHYMALUS *belioscopius*. C. B. P. Sun-spurge, or Wartwort.
2. TITHYMALUS *rotundis foliis, non crenatis*. H. L. Petty spurge.
3. TITHYMALUS *maritimus supinus annuus, pepelis dictus*. Raii Syn. Ed. 3. Small purple Sea spurge.
4. TITHYMALUS *sive esula exigua*. C. B. P. Small dwarf annual Spurge.
5. TITHYMALUS *maritimus minor Portlandicus*. Raii Syn. Ed. 3. Small Sea or Portland Spurge.
6. TITHYMALUS *platyphyllos Fuchsii*. J. B. Broad-leav'd Spurge.
7. TITHYMALUS *segetum longifolius*. Cat. Cant. App. Long-leav'd Corn-spurge.
8. TITHYMALUS *verrucosus*. J. B. Rough fruited Spurge.
9. TITHYMALUS *Hybernicus*. Merr. Pin. Knotty rooted Spurge, commonly called *Mack-in-boy* by the *Irish*.
10. TITHYMALUS *characias rubens peregrinus*. C. B. P. Foreign red Wood-spurge.
11. TITHYMALUS *sylvaticus, lunato flore*. C. B. P. Wood-spurge, with Flowers shap'd like a Crescent.
12. TITHYMALUS *characias, radice repente*. H. R. Monsp. Wood-spurge, with a creeping Root.
13. TITHYMALUS *characias angustifolius*. C. B. P. Narrow-leav'd Wood-spurge.
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14. *TITHYMALUS characias, folio serrato.* C. B. P. Wood-spurge, with Leaves sawed on their Edges.
15. *TITHYMALUS characias, radice pyriformi.* Mor. H. R. Blæs. Wood-spurge, with a pear-shap'd Root.
16. *TITHYMALUS characias, salicis minoris folio.* Mor. H. R. Blæs. Wood-spurge, with a smaller Willow-leaf.
17. *TITHYMALUS tuberosa pyriformi radice.* C. B. P. Spurge, with a tuberosé Root, shap'd like a Pear.
18. *TITHYMALUS linariae folio, lunato flore.* Mor. Hort. Blæs. Spurge, with a toad-flax Leaf, and a moon-shap'd Flower.
19. *TITHYMALUS arboreus linifolius.* H. R. Par. Tree-spurge, with Flax-leaves.
20. *TITHYMALUS amygdaloides angustifolius.* Tabern. Icon. Narrow-leav'd Spurge.
21. *TITHYMALUS orientalis, latissimo folio, villosus, flore lunato.* Tourn. Cor. Eastern hairy broad-leav'd Spurge, with a moon-shap'd Flower.
22. *TITHYMALUS orientalis, salicis folio, caule purpureo, flore magno.* Tourn. Cor. Eastern Spurge, with a Willow-leaf, a purple Stalk, and a large Flower.
23. *TITHYMALUS orientalis cyparissias patulus, foliis superioribus hastatis, flore minimo.* Tourn. Cor. Eastern cypress Spurge, with spreading Branches, the upper Leaves shap'd like a Spear, and a very small Flower.
24. *TITHYMALUS arboreus, humilior & patulus, latiore folio.* Tourn. Cor. Low spreading Tree-spurge, with a broader Leaf.
25. *TITHYMALUS arboreus, humilior & patulus, angustiore folio.* Tourn. Cor. Low spreading Tree-spurge, with a narrower Leaf.
26. *TITHYMALUS Græcus, amygdali folio acutissimo & glauco, caule purpureo.* Tourn. Cor. Greek Spurge, with a sharp-pointed Almond-leaf, and a purple Stalk.
27. *TITHYMALUS Græcus helioscopius maximus, foliis eleganter crenatis.* Tourn. Cor. Greatest Sun-spurge of Greece, with Leaves elegantly notched.
28. *TITHYMALUS orientalis palustris, tuberosa radice, lathyridis facie.* Tourn. Cor. Marsh eastern Spurge, with a tuberosé Root, and the Face of *Cataputia minor*.
29. *TITHYMALUS orientalis, latissimo folio, villosus, flore aureo, segmentis rotundioribus.* Tourn. Cor. The broadest-leav'd hairy eastern Spurge, with a golden Flower, having rounder Segments.
30. *TITHYMALUS orientalis, anacampserotis folio flore magno cristato.* Tourn. Cor. Eastern Spurge, with an Orpine-leaf, and a large crested Flower.
31. *TITHYMALUS orientalis, anacampserotis folio, tenuissime serrato, flore minori non cristato.* Tourn. Cor. Eastern Spurge, with an Orpine-leaf finely saw'd, and a smaller Flower not crested.
32. *TITHYMALUS orientalis, latissimo folio glauco & glabro.* Tourn. Cor. Eastern Spurge, with a very broad smooth sea-green Leaf.
33. *TITHYMALUS orientalis, patulus & humilior, salicis folio villosus.* Tourn. Cor. Low

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- spreading eastern Spurge, with a hairy Willow-leaf.
34. *TITHYMALUS orientalis, linariae folio, humillimus.* Tourn. Cor. The lowest eastern Spurge, with a toad-flax Leaf.
35. *TITHYMALUS arboreus, caule corallino, folio hyperici, pericarpio baybato.* Boerb. Ind. alt. Tree-spurge, with a red Stalk, a St. John's-wort Leaf, and a bearded Cover to the Fruit.
36. *TITHYMALUS arboreus altissimus, folio salicis, caulibus rubentibus.* Boerb. Ind. alt. The tallest Tree-spurge, with a Willow-leaf, and reddish Stalks.
37. *TITHYMALUS Lugdunensis, laureolæ folio.* D. Goiffon. Boerb. Ind. alt. French Spurge, with a Spurge-laurel-leaf.
38. *TITHYMALUS marinus, folio retuso, Terracinenfis.* Barr. Obs. Sea-spurge, with a blunt Leaf.
39. *TITHYMALUS folio longo glauco, caule rubro, capsulis verrucosis, elatior Siculus.* Raii Hist. Taller Spurge of Sicily, with a long sea-green Leaf, a red Stalk, and warted Seed-vessels.
40. *TITHYMALUS amygdali folio angustiori, Montis Pollini.* H. Cath. Sicilian Spurge, with a narrow Almond-leaf.
41. *TITHYMALUS amygdali folio breviori latiori hirsuto, Montis Pollini.* H. Cath. Sicilian Spurge, with a broader and shorter hairy Almond-leaf.
42. *TITHYMALUS arboreus, tuberosa radice, mollioribus foliis, semine verrucoso aspero.* Bocc. Mus. Tree-spurge, with a knobbed Root, soft Leaves, and a rough warted Seed.
43. *TITHYMALUS arboreus Africanus.* Inst. R. H. African Tree-spurge.
44. *TITHYMALUS arboreus Americanus, cotini folio.* Hort. Amst. American Tree-spurge, with a Venice Sumach-leaf.
45. *TITHYMALUS Americanus arboreus, cotini foliis minoribus, & verticillatim nascentibus.* Plum. Cat. American Tree-spurge, with smaller Venice Sumach-leaves, growing in Whorles.
46. *TITHYMALUS Americanus arboreus, foliis linariae.* Plum. Cat. American Tree-spurge, with toad-flax Leaves.
47. *TITHYMALUS qui peplis maritima fruticosa geniculata.* Sloan. Cat. Shrubby American Sea-spurge, with a jointed Stalk.
48. *TITHYMALUS Americanus characias variegatus, flore albo fructu villosus.* Houst. American strip'd Spurge, with a white Flower, and a hairy Fruit.
49. *TITHYMALUS Curassavicus, salicis & atriplicis foliis hirsutis, caulibus subrubentibus.* Prod. Par. Bat. Spurge from Curasso, with hairy Leaves, like the Willow or Orach, and reddish Stalks.
50. *TITHYMALUS Curassavicus, salicis & atriplicis foliis glabris, caulibus viridantibus.* Prod. Par. Bat. Spurge from Curasso, with smooth Willow or Orach-leaves, and greenish Stalks.
51. *TITHYMALUS Americanus annuus erectus, caule triangulari, foliis variis.* Houst. Upright annual American Spurge, with a triangular Stalk, and variable Leaves.

52. *TITHYMALUS Americanus annuus erectus latifolius, foliolis juxta flores albis. Houst.* Upright annual American Spurge, with broad Leaves, and the small Leaves near the Flowers white.

53. *TITHYMALUS maritimus, Barbadosis & Bermudensis, seu paralius minor Americanus ramosissimus. Pluk. Phyt.* American branching Sea-spurge.

54. *TITHYMALUS dulcis, parietariae foliis hirsutis, floribus ad caulium nodos conglomeratis. Sloan. Cat.* Sweet American Spurge, with hairy Pellitory-leaves, and Flowers growing in Clusters from the Joints of the Stalk.

55. *TITHYMALUS erectus acris, parietariae foliis glabris, floribus ad caulium nodos conglomeratis. Sloan. Cat.* Upright acrid Spurge, with smooth Pellitory-leaves, and Flowers growing in Clusters from the Joints of the Stalk.

56. *TITHYMALUS Americanus annuus erectus ramosissimus, ocymi caryophyllati foliis. Houst. Cat.* Upright annual branching American Spurge, with Leaves like the Bush-basil.

57. *TITHYMALUS maritimus Americanus procumbens, foliis subrotundis rarioribus, fructu majore. Houst.* Trailing American Sea-spurge, with roundish Leaves, and a larger Fruit.

58. *TITHYMALUS Americanus procumbens, foliis subrotundis, & ab alterâ parte auritis. Houst.* Trailing American Spurge, with roundish Leaves, and in other Parts the Leaves are eared.

59. *TITHYMALUS exiguus glaber, nummulariae folio. Inst. R. H.* Small smooth Spurge, with a Moneywort-leaf.

60. *TITHYMALUS exiguus villosus, nummulariae folio. Inst. R. H.* Small hairy Spurge, with a Moneywort-leaf.

The eight first Sorts are annual Plants, which grow wild in several Parts of England, so are rarely admitted into Gardens; but some of them generally come up as Weeds, in most cultivated Lands. The most common of these are the first, second, and fourth Sorts, the others growing but in some particular Parts of England wild. These Plants abound with a milky Juice, which some People apply to Warts to get them off; but this should be done with Discretion, otherwise there may be Danger of injuring the Part where it is applied, because it is a great Caustic. All these Sorts will come up from Seeds, whenever they are scatter'd; so that whoever hath a Desire to preserve them, need only allow them a Place; for they will require no Care to propagate them.

The ninth Sort grows wild in several Parts of Ireland, where it was formerly much in Use amongst the Natives of that Country, and was the chief Physic used by them for all Distempers, till of late, that they have gotten the Knowledge of Mercury, which has obtain'd so much with them, as to put this Plant quite out of Use.

This is an abiding Plant, having thick knobbed Roots, which may be separated every other Year, to propagate the Plant by those who desire it; tho' indeed it is rarely preserved but

in Botanic Gardens, for the sake of Variety. It is very hardy, and will thrive in almost any Soil or Situation, and dies to the Root every Autumn, and the Spring following comes up again. This may be planted in Wildernesses, where it will thrive very well under the Drip of Trees, and will serve to fill up in such Places where few other better Plants will live.

The tenth Sort is supposed to grow wild in England; but I believe, some People have taken the common Wood-spurge for this, when it has appear'd with Stalks somewhat redder than ordinary. This, and the ten following Sorts, grow wild in France, Italy, and Germany, from whence they have been procured by some Persons who are curious in Botany. All these are very hardy Plants, which may be propagated by Seeds, which may be sown in a Bed of fresh Earth, in the Spring; and when the Plants come up, they will require no farther Care, but to clear them from Weeds; and where they are too thick, some of them should be drawn out, to give those Plants which are designed to remain, Room to grow until Michaelmas, when they should be planted into Woods, and other Places covered with Trees; where they will make an agreeable Variety.

The fourteen Sorts next following were discovered by Dr. Tournefort in the Levant; from whence he sent their Seeds to the Royal Garden at Paris, where many of them were raised, and have since been communicated to several Persons who are curious in Botany in England. These are all of them very hardy Plants, so will be very proper to intermix with the Sorts before-mentioned, in Wilderness Quarters; where, if they have a dry Soil, they will thrive very well, and make an agreeable Appearance. Some of these Sorts die to the Root every Autumn, and rise again the following Spring; but they will not require any Care to preserve them; the only Culture they require is to keep them from being over-born by very large Weeds.

The thirty-fifth, thirty-sixth and thirty-seventh Sorts, are somewhat tenderer than either of the former; therefore, some Plants of each Kind should be kept in Pots to be sheltered in Winter, for fear those which are planted abroad should be destroyed. These may be propagated by Cuttings, which should be taken off from the old Plants a Week before they are planted, and laid in a dry Place, that the wounded Part may heal, otherwise they will rot. These Cuttings may be planted in a Bed of fresh undunged Earth, and shaded with Mats until they have taken Root; after which time they will require no farther Care, but to keep them clear from Weeds till Michaelmas; when they should be transplanted some of them into Pots, and the others under Trees on a dry Soil, and in a warm Situation, where they will endure the Cold of our ordinary Winters very well; but in severe Frosts, they are frequently destroyed. Those Plants in Pots should be removed into Shelter towards the

the End of *October*, and placed where they may have as much free Air as possible in mild Weather, otherwise their Shoots will be weak and unsightly; for if they are only protected from very hard Frosts, it is all these Plants require. These Sorts grow to the Height of six or seven Feet, and may be allowed a Place in Gardens, for the sake of Variety.

The thirty-eighth Sort is a very hardy Plant, which propagates itself very fast by its creeping Roots; so should not be planted near better Plants, because it will spread so far, and intermix its Roots with them, and destroy them. This Sort may be planted in some Quarters under Trees, where the Soil is very poor, in which it will thrive and fill up better than most other Plants.

The thirty-ninth and forty-second Sorts are somewhat tender, so some of the Plants should be preserved in Pots, and shelter'd in Winter; and the others may be planted on a dry Soil, and in a warm Situation, where they will endure the Cold of our common Winters, and will add to the Variety.

The fortieth and forty-first Sorts are biennial Plants, which seldom continue long after they have perfected their Seeds. These are very hardy Plants, so will grow in any Situation, provided they have a dry Soil; and if their Seeds are permitted to scatter, the Plants will come up and thrive without any other Care than to keep them from being over-born by large Weeds.

The forty-third Sort is tenderer than either of the former, so must be placed in a warm Green-house in Winter, otherwise it will not live in this Country. This is propagated by Cuttings, which must lie to dry a Fortnight before they are planted; for as the whole Plant abounds with a milky Juice, so, if the wounded Parts are not well healed over before they are planted, they are very subject to rot. The best time for planting of these Cuttings is in *July*, that they may be well rooted before Winter. These should be planted each into a separate small Pot, and if they are plunged into a very moderate Hot-bed, it will cause them to root the sooner. They should be now and then refreshed with Water, but it must not be given them in large Quantities, lest it rot them. When they are rooted, they must be inured to bear the open Air by Degrees, into which they may be removed, and placed in a warm Situation, where they may remain till *Michaelmas*, when they must be removed into the Green-house, and placed in the warmest Part of it. During the Winter Season these Plants must have but little Water, especially if they have no artificial Heat; for Moisture is very apt to rot these Plants in cold Weather.

The forty-fourth and forty-fifth Sorts grow plentifully in the Island of *Jamaica*, and in several other Places in the *West-Indies*. These are very tender Plants, so must be preserved in warm Stoves, otherwise they will not live in this Country. They may be propagated by Cuttings in the Summer Months, which must

be treated in the same manner as hath been directed for the *Euphorbiums*, in the former Volume of the *Gardeners Dictionary*; with which Management these Plants will thrive extremely well, and will make an agreeable Variety amongst other tender exotic Plants in the dry Stove.

The forty-sixth Sort was discovered by Father *Plumier* in the *French Settlements* in *America*, and was found by the late Dr. *Houftoun* at the *Havannah*, growing in great Plenty. This Sort may be propagated by Cuttings as the former, and should be treated in the same manner.

The forty-seventh Sort grows plentifully in *Jamaica*, and several other Parts of *America*. This may be propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a separate small Pot filled with fresh light sandy Earth, and then plunged into a Hot-bed of *Tanners-bark*, where they should be shaded from the Sun until they have taken Root; after which time they should have free Air admitted to them in warm Weather, and must be refreshed two or three times in a Week with Water; but as these Plants are full of Juice, so they should not have too much Moisture, lest it rot them. In this Hot-bed the Plants may remain till about *Michaelmas*, when they should be removed into the dry Stove; and may afterwards be treated in the same manner as the three former Sorts.

The forty-eighth Sort was found growing plentifully on the sandy barren Ground at *La Vera Cruz*, by the late Dr. *Houftoun*, who observed that all the Plants which he saw were variegated, so that he supposed they continued to come up so from the Seeds. This is a very beautiful Plant, and being tender, must be treated in the same manner as the Sorts last-mentioned.

The forty-ninth and fiftieth Sorts were found in great Plenty at *Campechy*, by the late Dr. *Houftoun*; from whence he sent their Seeds to *England*, where several of the Plants were raised. These Plants have their lower Leaves narrow and intire; and those which are produced near the upper Part of the Shoots are broad and indented, somewhat like those of the *Garden Orach*. The Flowers are produced at the Extremity of the Branches, which are of a greenish White, having little Beauty in them; and they soon fall off, so that the Plants rarely produce good Seeds in *England*.

These Plants are propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants come up, they should be each transplanted into a separate Pot filled with fresh light Earth, and then plung'd into the Hot-bed again, where they should be shaded until they have taken new Root; after which time they should be treated in the same manner as the tender Sorts before-mentioned. And in Winter, if these are plunged into the Bark-bed in the Stove, the Plants

Plants may more certainly be maintained, than if placed on Shelves in the dry Stove; but then they should not have too much Water given them in Winter, lest it rot them. With this Management the Plants may be preserved two or three Years, in which time they will grow to the Height of seven or eight Feet, and produce many Branches.

The ten last-mentioned Sorts are all of them annual Plants, so their Seeds should be sown early in the Spring on a moderate Hot-bed; and the Plants, when they are come up, must be planted into Pots, and plunged into a Hot-bed; for they are too tender to thrive in the open Air in this Country: so they must be continued in the Hot-bed, or, when they are pretty strong, they may be removed into the Stove, where they will flower in June and July, and their Seeds will ripen soon after, which will scatter themselves as soon as they are ripe, if they are not gathered; so that when the Plants are permitted to shed their Seeds, there will be a sufficient Supply of young Plants come up, in whatever Pots stand near them, as also in the Tan, if it be not disturbed. The first five of these Sorts grow usually about two Feet high or more; the next three seldom rise above a Foot high, and the two last trail on the Surface of the Ground, so that these make but an indifferent Appearance.

TORDYLIUM, Hartwort.

The Characters are;

It is an umbelliferous Plant, with a rose-shap'd Flower, consisting of five unequal heart-fashion'd Petals, which are placed circularly, and rest on the Empalement, which afterward becomes an almost-round Fruit, composed of two flat Seeds, which easily cast off their Covering, with a raised Border, which is commonly indented.

The Species are;

1. TORDYLIUM maximum. Inst. R. H. The greatest Hartwort.
2. TORDYLIUM Narbonense minus. Inst. R. H. Small Hartwort of Narbonne.
3. TORDYLIUM Apulum minimum. Col. P. 4 124. The smallest Hartwort of Apulia.
4. TORDYLIUM minus, limbo granulato, Syriacum. Mor. Umb. Small Hartwort of Syria, with a granulated Border.
5. TORDYLIUM folio longo angusto, flore albo magno, semine elegantissime & profundissime cre-nato albo. Boerb. Ind. alt. Hartwort with a long narrow Leaf, a large white Flower, and a white Seed beautifully and deeply notch'd.
6. TORDYLIUM orientale, Secacul Arabum dictum Rawolfio. Boerb. Ind. alt. Eastern Hartwort, called by Rawolf, Secacul of the Arabians.
7. TORDYLIUM Lusitanicum, cicutæ folio, semine striato. Inst. R. H. Portugal Hartwort, with a Hemlock-leaf, and a streaked Seed.
8. TORDYLIUM album, facie tordylii lutei Columnæ. Hort. Cath. White Hartwort, with the Appearance of Columnæ's yellow Hartwort.

All these are annual Plants, which perish soon after they have perfected their Seeds.

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The first Sort is found wild in several Parts of England, and the second Sort has been by some mentioned as an indigenous Plant of this Country; but I believe it is no-where found wild, unless where the Seeds have been purposely scatter'd. These Plants are preserved in the Gardens of some Persons who are curious in Botany, but there is little Beauty in them.

They are propagated by Seeds, which should be sown in the Autumn soon after they are ripe; when the Plants will soon appear, and are very hardy, so that they require no farther Care, but to keep them clear from Weeds; and where they come up too close together, they should be thinned so as to leave them six Inches asunder. In June following the Plants will flower, and their Seeds will ripen in August; which if permitted to scatter on the Ground, will produce a Supply of Plants without any Trouble. If the Seeds of these Plants are kept out of the Ground till Spring, they seldom succeed; for if any Plants are produced from the Seeds then sown, they commonly perish before they have perfected their Seeds; whereas those which are sown in Autumn do rarely fail. These Plants will grow on any Soil or Situation, so may be put into any obscure Part of the Garden.

TORMENTILLA, Tormentil.

The Characters are;

The Flower consists of four Petals, which are placed orbicularly, and expand in form of a Rose; out of whose one-leav'd Empalement (divided into several Segments, and shap'd like a Bason) arises the Pointal, which afterward becomes an almost globular Fruit, in which many Seeds are gathered into a sort of little Head, covered with the Empalement: to which Notes must be added, That there are commonly seven Leaves growing on the Top of the Foot-stalk.

The Species are;

1. TORMENTILLA sylvestris. C. B. P. Wild Tormentil, or Septfoil.
2. TORMENTILLA radice repente. Inst. R. H. Creeping-rooted Tormentil.
3. TORMENTILLA Alpina vulgaris major. C. B. P. Greater Tormentil of the Alps.
4. TORMENTILLA Cassubica major. Inst. R. H. Greater Tormentil, with deep cut Leaves.
5. TORMENTILLA Cassubica minor. Inst. R. H. Smaller Tormentil, with deep-cut Leaves.

The first Sort grows wild every-where on dry Pastures, and on Commons in most Parts of England. The Roots of this Plant have been frequently used for Tanning of Leather, in Places where Oak-bark is very scarce. This Root is also much used in Medicine, and is accounted the best Astringent in the whole vegetable Kingdom.

The second Sort is found in some particular Parts of England growing wild: the third Sort grows on the Alps, and the fourth and fifth Sorts grow in Denmark, Sweden, and some other Northern Countries; but are rarely preserved, unless in some Botanic Gardens, for the sake of Variety. It requires no Care to propagate these Plants, since, if their Seeds

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are sown in almost any Soil or Situation, the Plants will come up and flourish without any other Care, but to prevent their being over-run with great Weeds.

TOXICODENDRON, The Poison-oak.

To this Article must be added;

1. *TOXICODENDRON rectum, foliis minoribus glabris.* Hort. Elth. Upright Poison-tree, with smaller smooth Leaves.

2. *TOXICODENDRON rectum pentaphyllum glabrum, foliis latioribus.* Smooth five-leav'd upright Poison-tree, with broader Leaves.

3. *TOXICODENDRON amplexicaule, foliis minoribus glabris.* Hort. Elth. Climbing Poison-tree, with smaller smooth Leaves.

4. *TOXICODENDRON foliis alatis, fructu rhomboide.* Hort. Elth. Poison-tree with winged Leaves, and a Fruit shap'd like a Rhombus.

The first Sort here mentioned grows erect to the Height of five or six Feet: the Leaves of this Kind are much smaller, than those of the common Poison-oak; but the Branches of this are flexible, so that it will never make a Shrub of any great Height or Strength.

The second Sort was found in Maryland, from whence the Seeds were sent to England. This grows more upright than the former, and by the Appearance of the young Plants, seems to be a Shrub of much larger Growth.

The third Sort is a Native of Virginia, from whence I received the Seeds: this puts out Roots from the Branches, which fasten themselves to the Stems of Trees, or the Joints of Walls, by which the Branches are supported.

The fourth Sort is the same with the third, mentioned in the former Volume of the Dictionary, only differing in Sex; this being the Female, and the other the Male Tree. All the Sorts of *Toxicodendron* differ in Sex, the Male never producing any Fruit, having small herbaceous Flowers, without any Embryo's.

All these Sorts are hardy Plants, which will thrive in the open Air in this Country; but they love a moist Soil, and should be planted under Trees in Wildernesses, where they will thrive very well, and endure the Cold better than where they have a more open Exposure. They may be propagated by Seeds, or from Suckers, which some of the Sorts send forth in Plenty, or by laying down the Branches of those Sorts which do not put forth Suckers; which in one Season will be sufficiently rooted to transplant; when they should be planted, where they are designed to remain. The best Time to remove these Shrubs, is in March, because then there will be no Danger of their suffering by Frost.

The Wood of these Shrubs is accounted very poisonous, either by the handling of it, or smelling it when it is burning. Mr. Dudley has given an Account of the poisonous Quality of these Trees, in the *Philosophical Transactions*, where he mentions a Neighbour of his in New England, who was blind for several Days with handling the Wood; and another Gentleman of that Country, who was sitting by his Fire-side in Winter, in which was some of the

Poison-tree burning, the Smoak of which swelled him for several Days. But he says it has this Effect only on particular Persons; for his own Brother would handle and chew it, without any Harm; and that by the same Fire some Persons shall be poisoned, and others not the least affected. This Poison is not mortal, but will go off itself in a few Days, like the Sting of a Bee; but the People generally apply Plantain-water, or Sallet-oil and Cream, to the Part affected.

When a Person is poisoned by handling of this Wood, in a few Hours he feels an itching Pain, which provokes a Scratching, which is follow'd by an Inflammation and Swelling. Sometimes a Person has had his Legs poisoned, which have run with Water. Some of the Inhabitants of America affirm, they can distinguish this Wood by the Touch in the Dark, from its extreme Coldness, which is like Ice. But what he mentions of this poisonous Quality, is applicable to the fourth Sort here mention'd, which by his Description agrees with this Species.

This Sort of Poison-tree is not only a Native of America, but grows plentifully on the Mountains in Japan, where it is called *Pasi No Ki*; and from this Tree they extract one Sort of their Varnish or Lacca, which they use for Japanning their Utensils. But this is not their best Kind of Varnish, that being made of the Juice of another Tree, which is also very poisonous, and nearly allied to this, and from which some Writers think it differs only by Culture.

The Juice of this Tree is milky, when it issues out of the wounded Part; but soon after it is exposed to the Air, it turns black, and has a very strong foetid Scent, and is corroding. For I have observed, on cutting off a small Branch from one of these Shrubs, that the Blade of the Knife has been changed black in a Moment's time, so far as the Juice had spread over it; which I could not get off without grinding the Knife.

As this Tree is very common in Virginia, Carolina and New England, it would be well worth the Inhabitants Trial, to make this Varnish.

TRACHELIUM, Throatwort.

The Characters are;

It hath a funnel-shap'd Flower, composed of one Leaf, and cut into several Parts at the Top; whose Empalement afterward becomes a membranaceous Fruit often triangular, and divided into three Cells, which are full of small Seeds.

The Species are;

1. *TRACHELIUM azureum umbelliferum.* Pon. Bald. Blue umbelliferous Throatwort.

2. *TRACHELIUM umbelliferum violaceum, foliis laciniatis.* Inst. R. H. Throatwort with violet-coloured Flowers growing in Umbels, and jagged Leaves.

3. *TRACHELIUM villosum, floribus confertim ex foliorum alis nascentibus.* Inst. R. H. Hairy Throatwort. with Flowers growing in Clusters from the Wings of the Leaves.

4. *TRACHELIUM petraeum, floribus in capitulum congestis.* Inst. R. H. Rock Throatwort, with Flowers collected in Heads.

5. *TRACHELIUM minus Africanum, floribus violaceis, per caulem sparsis.* Inst. R. H. Smaller African Throatwort, with violet-coloured Flowers, growing thinly on the Stalks.

6. *TRACHELIUM Americanum, sonchi-folio, flore albo longissimo.* Plum. American Throatwort, with a sow-thistle Leaf, and a very long white Flower.

The first Sort is preserved in many curious Gardens for the Beauty of its Flowers, which continue a long time, and are succeeded by new Umbels on the Tops of the younger Shoots, so that the Plants continue in Beauty for some Months. This Plant is supposed to be a Native of some of the Islands in the *Archipelago*, from whence it was first brought to *Italy*, and hath been since spread to many Parts of *Europe*. It is hardy in respect to Cold, provided it has a proper Situation, which should be in the Crevices of old Walls, where it will abide the Cold very well; when those Plants which grow on warm Borders are frequently destroyed. This Plant has propagated itself by Seeds, on the Walls of some Gardens, where it has been planted; and those Plants which have grown on the Walls continue, when those which were in Pots, and preserved with Care, have been intirely destroyed.

The second Sort grows upon the Mountains of *Brescia*, about the Mouths of Caves, between the hardest Rocks, so that it is very difficult to get out the Roots.

The third Sort grows on the Rocks in several Places in the *Levant*.

All these Sorts are propagated by Seeds, which should be sown soon after they are ripe; for if they are kept out of the Ground till the Spring, they seldom grow. These Seeds should be sown in Pots filled with fresh undunged Earth, and placed in a shady Situation till the Beginning of *October*, when they may be removed into a more open Exposure; where they may have as much Sun as possible, but be sheltered from cold Winds. When the Cold is severe, they should be placed under a Hot-bed Frame, where they may enjoy as much free Air as possible in mild Weather; but they must be screened from hard Frosts, otherwise they are frequently destroyed.

They may also be propagated by Off-sets, or Cuttings, which may be taken off in the Spring or Summer Months; and should be planted in Pots filled with fresh undunged Soil, and placed in a shady Situation until they have taken Root, when they may be removed into a sheltered Part of the Garden; where being mix'd with other hardy exotic Plants, they will afford an agreeable Variety.

But as these Plants thrive better on old Walls, (when by Accident they have arisen there from Seeds) so their Seeds, when ripe, may be scattered on such Walls as are old, or where there is Earth lodged sufficient to receive the Seeds; where the Plants will resist

the Cold much better, and they will continue longer, than when sown in the full Ground; and when a few of the Plants are established on the Walls, they will shed their Seeds, so that they will maintain themselves without any farther Care. I have observed some Plants of the first Kind, which have grown from the Joints of a Wall, where there has not been the least Earth to support them; which have resisted the Cold, tho' they have been greatly exposed to the Winds; so that these Plants are very proper to cover the Walls of Ruins, where they will have a very good Effect.

The fourth Sort grows on the Mountains in *Italy*, from between the Crevices of the Rocks, from whence it is difficult to get out the Roots. This may be treated in the same manner as the former Sorts, and will thrive better on Walls, than if sown or planted in the Earth.

The fifth Sort is an annual Plant, which was brought from the *Cape of Good Hope* to *Holland*, where it has been preserved in some of their curious Botanic Gardens. This Sort will succeed well, if the Seeds are permitted to scatter on the Pots of Earth which are near them; provided the Pots are placed in the Green-house, where the Plants will come up and flower early the following Summer, and will have Time to perfect their Seeds; whereas, when the Seeds are sown in the Spring, the Plants will not flower till *August*; so that, if the Autumn should prove bad, they will not produce Seeds.

The sixth Sort grows plentifully in *Jamaica*, and several other Places in the warm Parts of *America*, where it grows in moist Places by the Sides of Rivers. This may be propagated by Seeds, which should be sown early in the Spring on a moderate Hot-bed; and when the Plants are come up, they should be transplanted on another Hot-bed, to bring the Plants forward; and then they may be treated in the same manner as hath been directed for the tender Sorts of *Rapuntium*. With which Management this Plant will thrive, and produce its Flowers; and if the Seeds are permitted to scatter, or are sown as soon as they are ripe, if the Pots are kept in the Stove, the Plants will come up, and flourish much better, than those sown in the Spring.

TRAGACANTHA, Goats-thorn.

To this Article must be added;

1. *TRAGACANTHA altera, Poterium forte Clusio. f. B.* Another Goats-thorn, with Leaves falling off in the Winter.

2. *TRAGACANTHA Alpina sempervirens, floribus purpurascens.* Inst. R. H. Evergreen Alpine Goats-thorn, with purplish Flowers.

3. *TRAGACANTHA Cretica, foliis minimis incanis, flore majore albo.* Tourn. Cor. Goats-thorn of Candy, with very small hoary Leaves, and a larger white Flower.

4. *TRAGACANTHA orientalis humillima, flore magno albo.* Tourn. Cor. A very low eastern Goats-thorn, with a large white Flower.

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5. *TRAGACANTHA orientalis humillima, barba Jovis folio. Tourn. Cor.* A very low eastern Goats-thorn, with a Jupiter's-beard Leaf.

6. *TRAGACANTHA orientalis humillima, foliis angustissimis argenteis. Tourn. Cor.* A very low eastern Goats-thorn, with very narrow silver Leaves.

7. *TRAGACANTHA orientalis humillima, se spargens, floribus spicatis. Tourn. Cor.* A very low spreading eastern Goats-thorn, with Flowers growing in Spikes.

8. *TRAGACANTHA orientalis humillima incana, flore purpurascens. Tourn. Cor.* A very low hoary eastern Goats-thorn, with a purplish Flower.

9. *TRAGACANTHA orientalis erectior, foliis viciae glabris, & ramis tomentosis. Tourn. Cor.* A more upright eastern Goats-thorn, with smooth vetch Leaves, and woolly Branches.

10. *TRAGACANTHA orientalis humilis, candidissima & tomentosa, floribus in foliorum alis in capitulum densum nascentibus. Tourn. Cor.* A lower very white and woolly eastern Goats-thorn, with Flowers growing in thick Heads, from the Wings of the Leaves.

11. *TRAGACANTHA orientalis humilis, floribus luteis dense congestis in foliorum alis. Tourn. Cor.* A low eastern Goats-thorn, with yellow Flowers thick-set in the Wings of the Leaves.

12. *TRAGACANTHA humilior, luteis floribus. C. B. P.* A lower Goats-thorn, with yellow Flowers.

13. *TRAGACANTHA orientalis, floribus luteis in capitulum longo pediculo donatum congestis. Tourn. Cor.* Eastern Goats-thorn, with yellow Flowers gathered into a Head, on a long Foot-stalk.

14. *TRAGACANTHA orientalis vesicaria, floribus purpureis in capitulum longo pediculo donatum congestis. Tourn. Cor.* Bladder eastern Goats-thorn, with purple Flowers gathered into a Head, and set on a long Foot-stalk.

15. *TRAGACANTHA orientalis latifolia, flore purpureo magno. Tourn. Cor.* Eastern Goats-thorn, with a large purple Flower.

16. *TRAGACANTHA orientalis, foliis angustissimis, flore purpurascens. Tourn. Cor.* Eastern Goats-thorn, with very narrow Leaves, and a purplish Flower.

17. *TRAGACANTHA orientalis, foliis oleæ, humillima, floribus in capitulum congestis. Tourn. Cor.* A very low eastern Goats-thorn, with olive Leaves, and Flowers gathered into a Head.

18. *TRAGACANTHA orientalis, foliis oleæ, incanis & tomentosis, caule ab imo ad summum florido. Tourn. Cor.* Eastern Goats-thorn, with hoary and woolly olive Leaves, and Flowers growing from the Bottom to the Top of the Stalks.

19. *TRAGACANTHA orientalis, foliis incanis, caule & ramulis tomentosis. Tourn. Cor.* Eastern Goats-thorn, with hoary Leaves, and woolly Stalks and Branches.

20. *TRAGACANTHA foliis incanis minoribus, minusque villosis. Boerb. Ind. alt.* Goats-

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thorn with smaller hoary Leaves, which are less hairy.

Most of the Sorts here mentioned were discovered by Dr. Tournefort in the *Levant*, from whence he sent the Seeds of several Kinds to the Royal Garden at *Paris*.

All these Sorts may be propagated by Seeds, which should be sown on a Bed of fresh Earth in *March*; and when the Plants come up, they should be carefully kept clean from Weeds; which, if permitted to grow amongst the Plants, would soon over-bear and destroy them, while they are young. If the Season should prove very dry, it will be of great Service to water the Plants now and then; and when they are large enough to transplant, they should be carefully taken up, and some of them planted in small Pots filled with fresh Earth, placing them in the Shade until they have taken Root; after which Time they may be removed into an open Situation, where they may remain till the latter end of *October*; when they should be placed under a common Frame, where they may be shelter'd from severe Frost, but may have free Air in mild Weather; when the Glasses should not be put over them.

The remainder of the Plants may be planted on a warm dry Border, where they must be shaded until they take Root; and if the Season should continue dry, they must be refresh'd with Water, otherwise they will be in Danger; because, while they are so young, their Roots will not have established themselves in the Ground, sufficiently to nourish them in great Droughts.

Those Plants which were planted in Pots, may be preserved for a Year or two under Frames in Winter, until they have obtained Strength, when they may be shaken out of the Pots, and planted in a lean dry Soil, and a warm Situation, where they will endure the Cold of our ordinary Winters very well; but as they are sometimes destroyed by hard Winters, so it will be proper to keep a Plant of each Kind in Pots, which may be sheltered in Winter to preserve the Species.

These Plants may also be propagated by Cuttings, which may be planted during the Summer Months, in the manner directed in the first Volume, for the Sorts there enumerated.

The *Gum Dragon* which is used in the Shops, is produced from several of these Species; tho' it was only from the second Sort mentioned in the former Volume, which Dr. Tournefort saw it taken.

At present these Plants are rarely preserved, excepting by some Persons who are curious in Botany; yet in large Gardens many of them deserve a Place, where, if they are planted on Hillocks, or the Slopes of dry Banks, they will have a very good Effect, especially as they retain their Leaves thro' the Year.

TRAGIA.

The Characters are;

It hath a funnel-shap'd Flower, consisting of one Leaf, for the most part divided into three Segments,

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Segments, but these are barren; for the Embryos are placed at a Distance on the same Plant, which afterward becomes a tricoccus Fruit, composed of three Cells, each containing one spherical Seed.

The Species are;

1. *TRAGIA alia scandens, urticae folio.* Plum. Nov. Gen. Climbing Tragia, with a Nettle-leaf.

2. *TRAGIA scandens, longo betonica folio.* Plum. Nov. Gen. Climbing Tragia, with a long Betony-leaf.

These Plants were discovered by Father Plumier in America, who constituted this Genus by this Name, in Honour to Hieronymus Bock, a famous Botanist, who was commonly called *Tragus*.

The first Sort grows plentifully in the Savannas in Jamaica, and the other warm Parts of America; where it twines round whatever Plants or Trees it grows near, and rises seven or eight Feet high, having tough woody Stems. The Leaves are like those of the common Nettle, and the whole Plant is covered with burning Spines, like those of the Nettle; which renders it very unpleasant to handle.

The second Sort was found by the late Dr. Houstoun at Campechy, from whence he sent the Seeds.

As these are Plants of no Beauty, so they are seldom preserved in this Country, except in some Botanic Gardens, for the sake of Variety. They are propagated by Seeds, which must be sown on a Hot-bed early in the Spring, and must afterwards be transplanted into Pots, and plunged into a Hot-bed of Tanners-bark, and treated in the same manner as the *Dioscorea*; with which Management these Plants will thrive very well.

TRAGOSELINUM, Burnet-saxifrage.

The Characters are;

It hath an umbellated rose-shap'd Flower, composed of five unequal heart-shap'd Petals, which are placed circularly, and rest on the Empalement; which afterward becomes a Fruit, composed of two oblong streaked Seeds.

The Species are;

1. *TRAGOSELINUM majus, umbellâ candidâ.* Inst. R. H. Greater Burnet-saxifrage, with a white Umbel.

2. *TRAGOSELINUM majus, umbellâ rubente.* Inst. R. H. Greater Burnet-saxifrage, with a red Umbel.

3. *TRAGOSELINUM alterum minus.* Inst. R. H. Lesser round-leav'd Burnet-saxifrage.

4. *TRAGOSELINUM minus.* Inst. R. H. Small Burnet-saxifrage.

5. *TRAGOSELINUM radice nigra, Germanicum.* Jussieu. German Burnet-saxifrage, with a black Root.

6. *TRAGOSELINUM Austriacum, foliis profundissime incis.* Boerb. Austrian Burnet-saxifrage, with Leaves very deeply cut.

7. *TRAGOSELINUM Creticum maximum villosum, flore albo.* Tourn. Cor. The greatest hairy Burnet-saxifrage of Crete, with a white Flower.

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8. *TRAGOSELINUM minus saxatile fetidissimum, apii folio.* Tourn. Cor. The least stinking rock Burnet-saxifrage, with a smallage Leaf.

9. *TRAGOSELINUM orientale laciniatum, umbellâ purpurascete.* Tourn. Cor. Eastern Burnet-saxifrage, with cut Leaves, and a purplish Umbel.

10. *TRAGOSELINUM orientale latiniatum, umbellâ albâ.* Tourn. Cor. Eastern cut-leav'd Burnet-saxifrage, with a white Umbel.

The first Sort is directed by the College of Physicians to be used in Medicine; but many Times the Herb-women in the Markets impose on ignorant Persons two Herbs for this one, viz. Burnet, and Meadow-saxifrage; which they sell for Burnet-saxifrage, which are two very different Plants, and of contrary Qualities. This Sort grows wild on the dry shady Banks in Kent, and in several other Parts of England.

The second Sort is a Variety of the first, from which it only differs in the Colour of the Flowers, which in this Sort are red, and the other are white.

The third Sort grows wild in some Parts of England, but is not so common as the fourth, which is the most common Sort in the Fields near London. This fourth Sort is sometimes brought to the Markets, and may be used instead of the first; tho' it is much better to have the particular Sort ordered by the College, when it can be procured.

All the other Sorts are Strangers in this Country, but are often preserved by the curious Botanists in their Gardens for Variety, and are all of them as hardy as the common Sorts.

These Plants are propagated by Seeds, which should be sown on a shady Border of fresh Earth at Michaelmas; for if they are sown in the Spring, they frequently miscarry, as do many of the umbelliferous Plants. In the Spring following the Plants will appear, when they should be carefully clear'd from Weeds; and as the Plants obtain Strength, so they should be thinned where they grow too close; leaving them five or six Inches apart. After this they will require no other Culture, but to keep them clear from Weeds. The second Summer these Plants will flower, and produce Seeds; but if the Roots are not disturbed, they will continue several Years, and produce Seeds annually. Therefore, where the Plants are designed to remain, the Seeds should be sown in Drills, at about sixteen Inches apart, which will allow Room to dig the Ground between the Rows every Winter; whereby the Roots will be greatly encouraged, and the Weeds will be better destroyed.

TRIBULUS, Caltrops.

The Characters are;

It hath a Flower composed of several Leaves, which are placed circularly, and expand in form of a Rose; out of whose Empalement rises the Pointal, which afterward becomes a turbidated

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nated Fruit, composed of several Parts, which have Thorns, collected into a Head, and having several Cells, in which are inclosed oblong Seeds.

The Species are ;

1. *TRIBULUS terrestris, ciceris folio, fructu aculeato.* C. B. P. Land-caltrop, with a Cich-leaf, and a prickly Fruit.

2. *TRIBULUS terrestris major Curassavicus.* Prod. Par. Bat. Greater Land American Cal-trops.

3. *TRIBULUS terrestris Americanus, fructu turbinato, foliis lanuginosis.* Plum. Cat. American Land-caltrops, with a turbinated Fruit, and downy Leaves.

4. *TRIBULUS terrestris Indiae orientalis, foliis viciae subrotundis & villosis.* Inst. R. H. East-India Land-caltrops, with roundish and hairy Vetch-leaves.

The first Sort is a very common Weed in the South of France, in Spain and Italy, where it grows amongst Corn, and on most of the arable Land, and is very troublesome to the Feet of Cattle ; for the Fruit, being armed with strong Prickles, run into the Feet of the Cattle, which walk over the Land. This is certainly the Plant which is mentioned in Virgil's Georgics, under the Name of *Tribulus* ; tho' most of his Commentators have applied it to other Plants.

It is called in English, *Caltrops*, from the Form of the Fruit, which resembles those Instruments of War that were cast in the Enemies Way to annoy their Horses.

This Plant is preserved in several curious Gardens in England, for the sake of Variety. It is propagated by Seeds, which should be sown in the Autumn ; for those which are kept out of the Ground till Spring, commonly remain in the Ground a whole Year, before the Plants come up. These Seeds should be sown on an open Bed of fresh light Earth, where they are design'd to remain ; for, as it is an annual Plant, so it doth not bear transplanting very well, unless it be done when the Plants are very young. In the Spring, when the Plants come up, they should be carefully clear'd from Weeds ; and where they come up too close, some of the Plants should be pulled out, to give Room for the remaining Plants to grow. After this they will require no other Culture, but to keep them clear from Weeds. In June they will begin to flower, and their Seeds will ripen in August and September ; which if permitted to scatter, the Plants will come up the following Spring, and maintain their Place, if they are not over-born with larger Weeds.

The Branches of this Plant trail on the Ground, and when the Plants are vigorous, will spread to a great Distance from the Root ; the Flowers come out on long Footstalks from the Division of the Branches, which are succeeded by the Fruit. These, when they are ripe, divide into several Parts ; so that, if they are not gathered, they will soon drop off.

The other three Sorts, being Natives of hot Countries, are very tender, so must be sown on a Hot-bed early in the Spring ; and when

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the Plants are come up, they must be each transplanted into a separate Pot, filled with rich light Earth, and then plunged into a Hot-bed of Tanners-bark, where they must be treated in the same manner as other tender exotic Plants ; being careful to bring them forward as early as possible in the Summer, otherwise they will not perfect their Seeds in this Country.

These are all of them annual Plants, whose Branches trail on the Ground, in the same manner as the common Sort ; but when their Roots are pretty much confined in the Pots, they will not grow so vigorous as when planted in larger Pots ; so will flower and fruit much earlier in the Season. The second Sort produce large yellow Flowers, which have an agreeable Scent.

TRICHOMANES, Maiden-hair.

There are three or four Varieties of this Plant, which grow in Europe ; but in America there are a great Number of Species, which are remarkably different from each other, as also from the European Kinds.

These being of the Tribe of Ferns, are seldom preserved in Gardens, but where any Person is curious to collect them. Their Roots should be planted in moist shady Places, especially the European Sorts, which commonly grow from between the Joints of old Walls, about Wells, and in other very moist shady Situations. But those Sorts which are brought from hot Countries, must be planted in Pots filled with Rubbish, and strong Earth mixed ; and in Winter they must be screened from hard Frosts, to which if they are exposed, it will destroy them.

The common Sort in England is generally sold in the Markets for the true *Maiden-hair*, which is a very different Plant, and not to be found in England, it being a Native of the South of France, and other warm Countries ; so is rarely brought to England.

TRIFOLIUM, Trefoil.

To this Article must be added ;

1. *TRIFOLIUM purpureum majus, foliis longioribus & angustioribus, floribus saturatoribus.* Raii Syn. The greater purple Trefoil, with longer and narrower Leaves, and deeper colour'd Flowers.

2. *TRIFOLIUM pratense folliculatum.* C. B. P. Bladder Meadow-trefoil.

3. *TRIFOLIUM luteum lupulinum minimum.* Mor. Hist. The least yellow Hop-trefoil.

4. *TRIFOLIUM montanum, spica longissima rubente.* C. B. P. Mountain-trefoil, with a very long reddish Spike.

5. *TRIFOLIUM montanum angustissimum spicatum.* C. B. P. Narrow-leav'd spiked Trefoil.

6. *TRIFOLIUM stellatum.* C. B. P. Rough starry-headed Trefoil.

7. *TRIFOLIUM lagopoides hirsutum angustifolium Hispanicum, flore ruberrimo.* Mor. Hist. Hairy narrow-leav'd hares-foot Spanish Trefoil, with a very red Flower.

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8. *TRIFOLIUM Aegyptiacum*, floribus albis, foliis oblongis, vulgo Bersain. *Jessieu*. Egyptian Trefoil, with whitish Flowers, and oblong Leaves, commonly called Bersain.

9. *TRIFOLIUM Creticum bituminoso simile*, plane inodorum, flore purpureo. *Tourn. Cor.* Trefoil of Candy resembling the bituminous one, but without Smell, with a purple Flower.

10. *TRIFOLIUM Creticum elegantissimum*, magno flore. *Tourn. Cor.* The most beautiful Trefoil of Candy, with a large Flower.

11. *TRIFOLIUM amplissimo folio subrotundo villosa*, flore purpurascens. *Tourn. Cor.* Trefoil with a very large roundish hairy Leaf, and a purplish Flower.

12. *TRIFOLIUM orientale altissimum*, caule fistuloso, flore albo. *Tourn. Cor.* The tallest eastern Trefoil, with a hollow Stalk, and a white Flower.

13. *TRIFOLIUM orientale majus villosissimum*, floribus flavescentibus. *Tourn. Cor.* The greater and more hairy eastern Trefoil, with yellowish Flowers.

14. *TRIFOLIUM clypeatum argenteum*. *Alp. Exot.* Silvery target-shap'd Trefoil.

15. *TRIFOLIUM Apulum annuum*, calyce vesicario. *Hort. Piss.* Annual Trefoil of Apulia, with a bladder Empalement.

The first Sort here mentioned grows wild in Pastures in many Parts of England, and is cut with the Hay, as is the common Trefoil; from which it differs in having longer and narrower Leaves, and the Flowers being of a deeper red Colour.

The second Sort grows wild in Italy, Spain, and the South of France; from whence the Seeds have been procured by some Persons who are Lovers of Botany, who preserve this Plant in their Gardens for the sake of Variety. This is an annual Plant, so the Seeds should be sown in Autumn, where the Plants are to remain; and in the Spring they must be kept clear from Weeds, which is all the Culture they require. In May the Plants will flower, and their Seeds will ripen in July. The Branches of this Sort trail on the Ground, and the Flowers are produced on Pedicles, from the Divisions of the small Branches, which are of a bright red Colour, and collected in small globular Heads.

The third Sort is frequently found wild on barren sandy Lands, in several Parts of England, so is not admitted into Gardens. This Sort has been by some Persons proposed to be cultivated for the Improvement of barren Land; but as it is a very small Plant, and but an Annual, so it is not worth the Trial, because the *Nonesuch* will thrive on any Soil where this will grow, and is a much stronger Plant; and if the Seeds are permitted to scatter in the manner I have directed, will produce a constant Supply of young Plants.

The fourth Sort grows wild in Germany, and several other Parts of Europe, but is not a Native of this Country. This Plant produces very long Spikes of reddish Flowers, which make a pretty Appearance, during the Time they continue in Beauty. This Plant

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is preserved by the Curious in Botany for the sake of Variety, but is seldom cultivated in other Gardens.

The fifth Sort produces very narrow Leaves, and slender Spikes of Flowers, which are of a pale red Colour, and being very small, make but an indifferent Appearance. This is not a Native of this Country.

The sixth Sort grows wild in the South of France, in Italy and Sicily; from whence the Seeds have been obtained by some curious Persons. This Sort produces starry Heads on the Tops of the Stalks, so is preserved for the sake of Variety.

The seventh Sort produces very beautiful red Flowers, which make a fine Appearance, so may be allowed a Place in some barren Part of the Garden, where few better Things will grow; or if the Seeds of this Kind were preserved in Quantity sufficient to sow a small Field in Sight of a House, it would afford a very agreeable Prospect when in Flower; and the Grass is as proper Food for Cattle, as the common Trefoil; but this being an annual Plant, is not so proper to cultivate in common, because it requires an annual Culture.

The eighth Sort is cultivated in Egypt for feeding of their Cattle, and also in some other eastern Countries. The Seeds of this Sort have been brought into Europe by some Persons who were desirous of having it cultivated here for the same Purposes; but this being an annual Plant also, is not so proper as the Clover, for the Reasons before given; besides, it being a tall slender Plant, is very subject to be beaten down by hard Rains, which will greatly damage it.

The tenth, eleventh, thirteenth, fourteenth and fifteenth Sorts, are all of them annual Plants, which are preserved in some curious Botanic Gardens, for the sake of Variety; but are not cultivated for Use. The Seeds of all these annual Trefoils should be sown in Autumn, early enough for the Plants to get Strength before the Frost comes on; for when the Seeds are sown in the Spring, they frequently fail; and those Plants which arise, seldom grow to any Magnitude, and rarely perfect their Seeds well. Some of these Sorts, which are remarkable for the Colours of their Flowers, are worth propagating in small Patches in Paddocks, where they will afford an agreeable Variety, if they are permitted to flower.

The ninth and twelfth Sorts are of longer Continuance than the other Sorts; but these are unfit for Fodder, so are only preserved by some curious Persons in their Gardens. These may be propagated by Seeds, in the same manner as the other Sorts, and will live abroad in Winter, if they are planted in a warm Situation, and on a dry Soil. The ninth Sort may also be propagated by Cuttings, which should be planted on a shady Border, where, if they are duly watered, they will soon take Root; and they may remain in this Border till Michaelmas, when they should be planted where they are designed to remain.

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TRIOSTEOSPERMUM, Doctor Tinkar's Weed, or false *Ipecacuana*.

The Characters are ;

It hath a tubulous Flower consisting of one Leaf, divided into five roundish Segments, and inclosed in a five-leav'd Empalement, having another Cup resting on the Embryo; which afterwards becomes a roundish fleshy Fruit, inclosing three hard Seeds, which are broad at their upper Part, and narrower at Bottom.

We have but one Species of this Plant; viz.

TRIOSTEOSPERMUM latiore folio flore rutilo. Hort. Elth. Broad-leav'd Trioosteospermum, with a reddish Flower, commonly called Dr. Tinkar's Weed, or false *Ipecacuana*.

This Plant is a Native of New England, Virginia, and some other Northern Parts of America, where it has been frequently used as an Emetic, and is commonly called *Ipecacuana*. One of the first Persons who brought it into Use, was Dr. Tinkar, from whence many of the Inhabitants call it by the Name of Dr. Tinkar's Weed. The Leaves of this Plant greatly resemble those of the true *Ipecacuana*, but the Roots are very different; and by the most authentic Account we have of the true Sort, it differs in Flower and Fruit from this Plant.

It grows on low marshy Grounds, near Boston in New England, very plentifully; where the Roots are taken up every Year, and are continued in Use amongst the Inhabitants of Boston.

This Plant is preserved in several curious Gardens in England, and is hardy enough to thrive in the open Air: but it should be planted on a moist light Soil; for if it is on a dry Ground, there must be Care taken to water the Plants constantly in dry Weather, otherwise they will not thrive. It may be propagated by Seeds, which should be sown on a Border of light Earth, where the morning Sun only comes on it; but if these Seeds are sown in the Spring, they will remain in the Ground a whole Year, before the Plants will come up: so that during this Time the Border must be constantly kept clear from Weeds; and the following Spring, when the Plants appear, they should be duly watered in dry Weather, which will greatly promote the Growth of the Plants. They must also be constantly kept clean from Weeds, which, if permitted to grow amongst them, will soon over-bear the Plants while they are young; and either quite destroy the Plants, or so much weaken them, that they will not recover it in a long time.

The Plants may remain in this Seed-border, until the Michaelmas following, when they should be carefully taken up, and transplanted where they are designed to remain. Some of them should be planted in Pots, that they may be sheltered in Winter, lest those which are in the full Ground should be destroyed by severe Frost.

This Plant may be also propagated by parting of the Roots. The best Season for this

Work is in the Spring, just before the Plants begin to shoot, which is commonly about the Middle or latter End of March; but in doing of this, the Roots must not be parted too small, for that will prevent their flowering strong. This Plant usually grows about two Feet high, and the Flowers come out from the Wings of the Leaves, which being small, make no great Figure in a Garden. However, a few of the Plants may be allow'd a Place in some moist wilderness Quarters, where they are not too much over-shaded by Trees; where they will thrive, and add to the Variety.

This Plant perfects its Seeds in this Country every Year; which if sown in Autumn as soon as they are ripe, the Plants will come up the following Spring; by which a whole Year is saved. These seedling Plants will not flower until the third Year; and then they seldom grow so strong as the older Plants.

TRITICUM, Wheat.

To this Article must be added;

1. **TRITICUM rufum hexastichon.** C. B. P. Six-row'd Wheat.
2. **TRITICUM semine oblongo.** C. B. P. Long-grain'd Wheat.
3. **TRITICUM aristis longioribus, spica alba.** C. B. P. White-eared Wheat, with long Awns.

The first of these Sorts of Wheat is not very common in England at present. This has six Rows of Grains to each Ear or Spike; but the Spikes are not so long as in some of the other Sorts: but it is very much esteem'd for the Goodness of the Grain in Savoy, where it is chiefly cultivated.

The second Sort I have observed in some Parts of Kent, where it is by some Farmers cultivated. This produces a longer Grain than most other Sorts, but is not so full; and having more Chaff, is not so much esteem'd as some other Sorts.

The third Sort is frequently cultivated in most Parts of England, and is esteem'd a very hardy Sort of Corn. The Awns of this Sort are as long as those of Rye; so that by unskilful Persons it is frequently taken for it, while it is standing on the Field.

Of all the Sorts of Wheat now cultivated in this Country, the Cone Wheat is chiefly prefer'd, as being a larger Ear, and a fuller Grain, than any other Sort. But the Seeds of these Corns should be annually changed; for if they are sown on the same Farm, where they are sowed for some Years, they will not succeed so well as when the Seed is brought from a distant Country; nay, it is a much better Method to procure the Seeds from Sicily, or some other Corn Country, than to sow English Seeds. The Husbandmen in the Low Countries annually procure their Seed Wheat from Sicily, or the Islands of the Archipelago; which they find thrives much better, and produces a finer Grain, and is also not so liable to Smut, as the Corn of their own sowing.

TRIUMFETTA.

The Characters are ;

It hath a Flower consisting of several Petals, which are placed circularly, and expand in form of a Rose: from whose Empalement arises the Pointal, which afterward becomes a hard spherical burry Fruit, inclosing four angular Seeds.

The Species are ;

1. TRIUMFETTA fructu echinato racemoso. Plum. Nov. Gen. Triumfetta with a burry-branching Fruit.

2. TRIUMFETTA fructu echinato racemoso, minor. Millar. Smaller Triumfetta, with a burry-branching Fruit.

The first of these Plants is very common in the Island of Jamaica, and several other Parts of America ; but the second Sort is more rare, being found in but few Places. The Seeds of this Kind were sent to England by Mr. Robert Millar, who discovered the Plant on the North Side of the Island of Jamaica.

These are both very tender Plants, so must be preserved in the warmest Stoves, otherwise they will not live thro' the Winter in this Country. They are propagated by Seeds, which must be sown on a Hot-bed early in the Spring ; and when the Plants are come up, they should be each transplanted into a separate Pot filled with light fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, and shaded from the Sun until they have taken new Root ; after which Time they must be treated in the same manner as hath been directed for other tender exotic Plants. During the Summer Season the Plants may remain in this Hot-bed, but in Autumn they must be removed into the Stove, and plunged into the Bark-bed, observing to water them frequently ; but in very cold Weather it must not be given to them in large Quantities. If the Plants live thro' the Winter, they will flower the following June, so will ripen their Seeds in September ; but the Plants may be continued two or three Years, provided they are carefully managed.

The Flowers of these Plants are small, and of a yellow Colour, somewhat like those of Agrimony ; for which the Plant has been by some ranged under that Genus. These Flowers are produced in Branches at the Extremity of the Shoots ; but as they are not very beautiful, so they are seldom preserved but in such Gardens, where Variety is chiefly intended.

The first of these Sorts rises to the Height of six or seven Feet, and the Stem becomes woody. Toward the Top it divides into several Branches, each of which produces a Spike or Bunch of Flowers. The Leaves of this Sort are pretty large, and shap'd like those of the larger Malvinda.

The second Sort seldom rises more than three Feet high, and has smaller Leaves than the first. The Stem of this Sort is woody, but it doth not branch so much as the former, and is in every respect a much less Plant than that.

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TURNERA.

The Characters are ;

It hath a funnel-shaped Flower, consisting of five Leaves, which are fastened to the Calyx, which is monopetalous, and divided into five Parts at the Top : under the Flower-cup there are two Leaves, which join at the Bottom, and surround the Cup : from the Center of the Flower-cup arises the Pointal, which is divided into three Parts to the Bottom, and surrounded by five Stamina. This Pointal afterward becomes an almost spherical Fruit, which is divided into three Parts, and filled with roundish Seeds, which are fastened to the Placenta by slender Threads.

The Species are ;

1. TURNERA frutescens ulmifolia. Plum. Nov. Gen. 15. Shrubby Turnera, with an Elm-leaf.

2. TURNERA frutescens, folio longiore & mucronato. Shrubby Turnera, with a longer pointed Leaf.

These Plants are both of them Natives of the warm Parts of America. The first Species was found by Father Plumier in Martinico, who gave it the Name of Turnera, from Dr. Turner, a famous English Physician, who lived in Queen Elizabeth's Reign, and wrote a Herbal, in which he has chiefly figured and described the useful Plants.

The other Species was discovered by Sir Hans Sloane, Baronet, who has figured it in his Natural History of Jamaica, under the following Name ; *Cistus urticae folio, flore luteo, vasculis trigonis*. But both these Sorts were observed by my late Friend Dr. William Houstoun, in several Parts of America. These grow to the Height of five or six Feet, and may be trained into regular Shrubs : they both produce yellow Flowers, which come out at the Foot-stalks of the Leaves, and are continued for at least nine Months, which renders them worthy of a Place in the Stove.

They may easily be propagated, by sowing their Seeds on a Hot-bed early in the Spring ; and when the Plants are come up two Inches high, they must be transplanted into small Pots, and plunged into a Hot-bed of Tanners-bark, observing to water and shade them until they have taken Root ; after which Time they must be treated as hath been directed for the Guava's ; to which the Reader is desired to turn, to avoid Repetition. The Seeds of these Plants will often fall into the Pots which are placed near them in the Stove ; which will grow, and soon furnish Plants enough, after a Person is once possessed of them. These Plants are too tender to live in the open Air in England ; so they must be placed in the Bark-bed in the Stove ; where, during the Winter Season, they must be kept warm, and frequently watered ; but in the Summer Season they must have a great Share of Air, otherwise they will draw up tender, and not produce many Flowers.

When the Plants are grown pretty large, they may be treated more hardily, by placing them

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them in the dry Stove ; where, if they are kept in a moderate Degree of Heat, they will thrive and flower very well. Those who would save the Seeds of these Plants, must watch them carefully, because, when they are ripe, they soon scatter, if they are not gathered.



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VALERIANA, Valerian.

To this Article must be added ;

1. VALERIANA *Alpina, foliis integris, radice repente, inodora.* Raii Hist. Alpine Valerian, with undivided Leaves, and a creeping Root, without Smell.
2. VALERIANA *Alpina prima.* C. B. P. The first Alpine Valerian of Caspar Baubin.
3. VALERIANA *Alpina altera.* C. B. P. Another Alpine Valerian of Caspar Baubin.
4. VALERIANA *Alpina, scrophulariæ folio.* C. B. P. Alpine Valerian, with a figwort Leaf.
5. VALERIANA *montana, subrotundo folio.* C. B. P. Mountain Valerian, with a roundish Leaf.
6. VALERIANA *Alpina nardo Celticæ similis.* C. B. P. Alpine Valerian, resembling the Celtic Spikenard.
7. VALERIANA *Cretica, filipendulæ radice.* Inst. R. H. Candy Valerian, with a dropwort Root.
8. VALERIANA *Celtica.* Inst. R. H. Celtic Valerian, or Spikenard.
9. VALERIANA *marina angustifolia, five minor alba.* Mor. Hist. Narrow-leav'd or smaller white Sea Valerian.
10. VALERIANA *Alpina minor.* C. B. P. Smaller Alpine Valerian.
11. VALERIANA *tuberosa Imperati.* Tourn. Cor. Tuberosé-rooted Valerian of Imperatus.
12. VALERIANA *orientalis angustifolia, floribus & radice Valerianæ bortenfis.* Tourn. Cor. Narrow-leav'd eastern Valerian, with the Flowers and Root of the Garden Valerian.
13. VALERIANA *orientalis, alliariæ folio, flore albo.* Tourn. Cor. Eastern Valerian, with a sauce-alone Leaf, and a white Flower.
14. VALERIANA *orientalis, sisymbrii Matthioli folio.* Tourn. Cor. Eastern Valerian, with a water-cress Leaf.
15. VALERIANA *orientalis minima, flore leucophæo.* Tourn. Cor. The least eastern Valerian, with a whitish Flower.
16. VALERIANA *maxima Pyrenaica, caca-liæ folio.* D. Fagon. Inst. R. H. The greatest Pyrenean Valerian, with a strange coltsfoot Leaf.
17. VALERIANA *foliis calcitrapæ.* C. B. P. Valerian with Leaves like those of the Star-thistle.
18. VALERIANA *Lusitanica annua latifolia laciniata.* Inst. R. H. Broad jagged-leav'd annual Valerian of Portugal.

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19. VALERIANA *humilis Americana, folio rotundo subtus argenteo.* Plum. Dwarf American Valerian, with a round Leaf white underneath.

The first, second, third, fourth, sixth and tenth Sorts, grow on the Alps, from whence they have been procured by some curious Botanists, and are preserved in their Gardens for Variety. These are abiding Plants, which may be propagated by parting of their Roots. The best Time to transplant these Plants, and part their Roots, is soon after Michaelmas, when their Leaves decay, that they may have good Rooting in the Ground before the dry Weather comes on in the Spring ; otherwise they will not flower strong the following Summer. All these Sorts should be planted on a strong loamy Soil, and in a shady Situation ; where they will thrive much better than on a light Earth, and in an open Situation, in which they will not live, unless they are duly watered in dry Weather.

The fifth Sort has been found on the Mountains in the North of England, but is very common in several Parts of Germany, as also on the Alps and Pyrenean Mountains.

The seventh Sort grows in several Islands of the Archipelago, and also in Liguria : it is chiefly found on Hills and Mountains which are moist. The Roots of this Sort are as large as small Walnuts, which hang from Dugs after the manner of Dropwort. These Roots, when bruised, emit a Smell very like Spikenard.

The eighth Sort is the true Spikenard, which is used in Medicine. This grows in great Plenty amongst the Moss, on the Tops of the Alps, where the Snow lies a great Part of the Year. These Roots are taken up for Use in August, when the Leaves decay, at which time they have the strongest Scent.

The eleventh Sort has also knobbed Roots, about as large as Walnuts, which have a Scent somewhat like Spikenard. This Sort has Leaves like those of the small Valerian, and the Flowers resemble those of the great Garden Sort, which grow about two Feet high.

All these Sorts are very hardy Plants in respect to Cold ; but they will not live in a dry light Soil, and an open Situation : therefore whoever is inclineable to cultivate them, should plant them on a moist loamy Soil, on a North Border, where they may be intirely screen'd from the Sun ; and in very dry Weather they must be constantly watered, otherwise they will not thrive. These Sorts with knobby Roots should not be often transplanted : if they are removed every third Year, it will be often enough ; but then the Ground between the Roots should be every Spring gently dug to loosen it, being careful not to cut or bruise the Roots. These Plants usually flower in June, but they seldom produce good Seeds.

The ninth Sort is not very common in the English Gardens at present. This only differs from the Garden Valerian with white Flowers, in having narrow Leaves ; so may be propagated in the same manner as hath been directed in the former Volume of the Dictionary, for the red and white Garden Valerian. It will also

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also propagate itself by Seeds, if they are permitted to scatter in a shady Situation, where the Plants will come up without any Care, and may be transplanted into large Borders, where they will make an agreeable Variety, and continue a long time in flower.

The twelfth, thirteenth, fourteenth and fifteenth Sorts, were discovered by Dr. Tournefort in the *Levant*, from whence their Seeds were sent to *Paris*. These are also hardy Plants, which will live in the open Air, and should have a shady Situation, and be planted on a moist light Soil.

The sixteenth Sort is a Native of the *Pyrenean Mountains*; but is preserved in the Gardens of the Curious in Botany, for the sake of Variety. This is a biennial Plant, so must be permitted to scatter its Seeds, for a Supply of young Plants. This Plant should have a moist Soil, and a shady Situation; where it will thrive, and produce good Seeds; but if the Seeds are not sown in Autumn, they seldom grow; so that when they scatter themselves, they generally grow better than when they are sown by Hand. This Sort rises three Feet high, and has very broad Leaves; but the Flowers, being small, make no great Appearance; and when their Seeds are ripe, the Plants soon after perish.

The seventeenth and eighteenth Sorts are annual Plants, which, if once introduced into a Garden, will scatter their Seeds, and maintain their Situation. The Seeds of these Kinds will disperse themselves to a great Distance by the Help of the Down which adheres to them; and often grow on Walls and Buildings, where they are stunted and small; but will flower and seed, whereby they will become errant Weeds; notwithstanding they decay as soon as their Seeds are ripe. These two Sorts will grow on any Soil, or in any Situation; but they will thrive best on a moist Soil, and in a shady Situation. Their Seeds must be sown in Autumn, otherwise they seldom succeed.

The nineteenth Sort is a Native of the warm Parts of *America*, so is a tender Plant, and very rare in *Europe*; for the Seeds will not grow when kept long out of the Ground; but should be sown in Tubs of Earth abroad; and when the Plants are come up, they may be brought over to *England*. This Sort must be preserved in a Stove; for it is too tender to live in the open Air in this Country. In Summer this Plant should have a large Share of free Air, by opening the Glasses of the Stove in warm Weather; and must be frequently watered, for it grows naturally on low marshy Places, and requires a large Share of Water in hot Weather; but in Winter it must be kept warm, and have but little Water in very cold Weather.

VALERIANELLA, Corn-fallet, or Lambs-lettice.

To this Article must be added;

1. *VALERIANELLA semine umbilicato nudo rotundo. Mor. Umb.* Corn-fallet with a round naked umbilicated Seed.

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2. *VALERIANELLA semine umbilicato nudo oblongo. Mor. Umb.* Corn-fallet with an oblong naked umbilicated Seed.

3. *VALERIANELLA semine umbilicato birsuto majore. Mor. Umb.* Corn-fallet with a larger hairy umbilicated Seed.

4. *VALERIANELLA semine umbilicato birsuto minore. Mor. Umb.* Corn-fallet with a smaller hairy umbilicated Seed.

5. *VALERIANELLA Cretica, fructu vesicario. Tourn. Cor.* Candy Corn-fallet, with a bladder'd Fruit.

6. *VALERIANELLA cornucopioides echinata. Inst. R. H.* Prickly Corn-fallet, resembling a Helmet.

7. *VALERIANELLA orientalis, fructu parvo corniculato. Tourn. Cor.* Eastern Corn-fallet, with a small horned Fruit.

The four first Sorts are Varieties of the common Corn-fallet, which are preserved in some curious Botanic Gardens for the sake of Variety. These are all very hardy Plants, which, if permitted to scatter their Seeds, will come up in almost any Soil or Situation, and require no other Care but to keep them clear from Weeds. When they are not permitted to scatter their Seeds, they should be sown in Autumn; otherwise the Seeds will often lie in the Ground till the following Autumn before they grow.

The fifth and seventh Sorts were discovered by Dr. Tournefort in the *Levant*, from whence he sent their Seeds to the Royal Garden at *Paris*; which have since been communicated to many curious Persons in *England*. These are very hardy Plants, which may be propagated by Seeds, in the same manner as the other Sorts; and if they are permitted to scatter their Seeds, will come up, and require no other Care, but to keep them clear from Weeds.

The sixth Sort produces Tufts of red Flowers, which are shaped like a Helmet; and make a pretty Appearance when blown. This is also a hardy Plant, and may be propagated in the same manner as the other Sorts.

VANILLA.

The Characters are;

It hath an anomalous Flower, consisting of six Leaves, five of which are placed in a circular Order, and the other, which occupies the Middle, is concave. The Empalement afterward becomes a horned soft fleshy Fruit, filled with very small Seeds.

The Species are;

1. *VANILLA flore viridi & albo, fructu nigrescente. Plum. Nov. Gen.* Vanilla with a green and white Flower, and a blackish Fruit.

2. *VANILLA flore violaceo, fructu breviori rubro. Plum. Nov. Gen.* Vanilla with a violet-colour'd Flower, and a short red Fruit.

3. *VANILLA flore albo, fructu breviori corallino. Plum. Nov. Gen.* Vanilla with a white Flower, and a short coralline Fruit.

The Fruit of these Plants is called by the Spaniards in *America*, *Vanilla*, or *Vinello*, and is much used by them to scent their *Chocolate*. It is the first Species here mentioned, which is chiefly

chiefly esteemed. This grows plentifully in the *Bay of Campechy*, in the *West-Indies*; where they are usually sold for about Three-pence each Fruit, *English Money*.

The other two Sorts are found in several Parts of *America*, where they always grow in low marshy Places under Trees, and fasten themselves to the Trunks of the Trees, and are thereby supported. The Fruit of these Kinds are rarely used, being of little Value; but the other Sort is often brought into *Europe*, and sold by the Druggists.

The Method of gathering and preparing of this Fruit for Use is little known to the *Europeans*, being manufactured by the *Indians*, who sell it very cheap to the *Spaniards*. However, I shall subjoin an Account which I received from an intelligent Person, who had resided in the *Spanish West-Indies* for some time; but shall first describe the Plant, with its Manner of Growth, and how it may be propagated in the warm Parts of *America*.

The Plant which produces the Fruit called *Vanilla* or *Banilla*, by the *Spaniards*, hath a trailing Stem, somewhat like common *Ivy*, which fastens itself to whatever Tree grows near it, by small Fibres, which are produced at every Joint, which fasten to the Bark of the Tree, and by which the Plants are often nourished, when they are cut or broken off from the Root a considerable Height from the Ground, in like manner as the *Ivy* is often seen in *England*. The Leaves are as large as those of the common *Laurel*, but are not quite so thick: these are produced alternately at every Joint, (which are six or seven Inches asunder) and are of a lively green Colour on the upper Side, but are of a paler Green underneath. The Stems of these Plants shoot into many Branches, which fasten themselves also to the Branches of the Trees; by which means they rise to the Height of eighteen or twenty Feet, and spread quite over some of the smaller Trees, to which they are joined. The Flowers are of a greenish yellow Colour, mixed with white; which, when fallen, are succeeded by the Fruit, which are six or seven Inches long.

This Sort, which is manufactured, grows not only in the *Bay of Campechy*, but also at *Cartagena*, at the *Caraccas*, *Honduras*, *Darien* and *Cayan*; at all which Places, the Fruit are gathered and preserved: but is rarely found in any of the *English Settlements* in *America* at present, tho' it might be easily carried thither and propagated; for the Shoots of these Plants are full of Juice, so may be easily transported; because they will continue fresh out of the Ground for several Months. I had some Branches of this Plant, which were gathered by Mr. Robert Millar at *Campechy*, and sent over between Papers by way of Sample: these had been at least four Months gathered, when I received them; and upon opening of the Papers, I found the Leaves rotten, with the Moisture contained in them, and the Paper was also perished with it; but the Stems appear'd fresh: upon which I planted some of

them in small Pots, and plunged them into a Hot-bed of Tanners-bark; where they soon put out Leaves, and sent forth Roots from their Joints. But as these Plants naturally fasten themselves to the Stems of the Trees, so it is with great Difficulty they are kept alive, when they have not this Assistance: therefore whoever would preserve any of these Plants in *Europe*, should plant them in Tubs of Earth, near the Stem of some vigorous *American Tree*, which requires a Stove, and can bear a great deal of Water; because the *Vanilla's* must be plentifully watered in the Summer Season, otherwise they will not thrive. They require also to be shaded from the Sun by Trees; so that if these are planted at the Foot of the *Hernandia*, or *Jack-in-a-Box*, whose Leaves are very large, and afford a good Shade, they will succeed better than when they are exposed in single Pots alone; and as these Plants require the same Degree of Heat in Winter, so they will agree well together.

When these Plants are designed for Propagation in the warm Parts of *America*, there is nothing more required than to make Cuttings of about three or four Joints in Length, which should be planted close to the Stems of Trees, in low marshy Places; and to keep down other troublesome Plants, which if permitted to grow about the Cuttings before they are well rooted, would over-bear and destroy them: but after they are established, and have fastened their Shoots to the Stems of the Trees, they are not in much Danger of being injured by neighbouring Plants; tho' when the Ground is kept clear from Weeds, the Plants will be much better nourished.

These Plants do not produce Flowers until they are grown strong, so that the Inhabitants affirm, that it is six or seven Years from the Planting to the Time of their bearing Fruit. But when they begin to flower and fruit, they continue for several Years bearing, and this without any Culture; and as it is a Commodity which bears a good Price, it is well worth Cultivating in several of the *English Settlements*, especially as they will grow in moist woody Places, where the Land is not clear'd from Timber.

The Method used to prepare the Fruit, is, when it turns of a yellow Colour, and begins to open, to gather it and lay it in small Heaps to ferment two or three Days, in the same manner as is practised for the *Cocoa* or *Chocolate* Pods. Then they spread them in the Sun to dry, and when they are about half dried, they flat them with their Hands, and afterwards rub them over with the Oil of *Palma Christi*, or of the *Cocoa*: then they expose them to the Sun again to dry, and afterward they rub them over with Oil a second time; then they put them in small Bundles, covering them with the Leaves of the *Indian-Reed* to preserve them.

These Plants produce but one Crop of Fruit in a Year, which is commonly ripe in *May*, fit for gathering; for they do not let them remain on the Plants to be perfectly mature, because

because then they are not so fit for Use; but when they are about half changed yellow, they esteem them better for keeping, than when they are changed to a dark brown Colour; at which time the Fruit splits, and shews a great Quantity of small Seeds, which are inclosed within it. While the Fruit is green, it affords no remarkable Scent; but as it ripens, it emits a most grateful aromatic Odour. When the Fruit begins to open, the Birds attack them, and devour all the Seeds very greedily; but do not eat any other Part of the Fruit.

The Fruit which are brought to Europe, are of a dark brown Colour, about six Inches long, and scarce an Inch broad; are wrinkled on the Outside, and full of a vast Number of black Seeds like Grains of Sand, of a pleasant Smell, like Balsam of Peru.

This Fruit is only used in England, as an Ingredient in Chocolate, to which it gives a pleasant Flavour. But the Spanish Physicians in America use it in Medicine, and esteem it grateful to the Stomach and Brain, for expelling of Wind, to provoke Urine, to resist Poison, and cure the Bite of venomous Animals.

As this Plant is so easily propagated by Cuttings, it is very strange, that the Inhabitants of America should neglect to cultivate it, especially as it is an Ingredient in Chocolate, which is so much drank all over America; but as the English have in a manner quite neglected the Culture of the Cocoa, it is no wonder they should neglect this; since the former was cultivated in great Plenty by the Spaniards in Jamaica, while that Island remained in their Possession; so that the English had an Example before them, if they would have followed it: whereas the Vanilla was not found growing there; and therefore it is not to be supposed, that the Persons who were so indolent, as to quit the Culture of many valuable Plants then growing on the Spot, should be at the Trouble of introducing any new Plants.

VERBASCUM, Mullein.

To this Article must be added;

1. VERBASCUM *fœmina*, flore luteo magno. C.B.P. Female Mullein, with a large yellow Flower.

2. VERBASCUM *angustifolium ramosum*, flore aureo, folio crassiore. J.B. Branching narrow-leav'd Mullein, with a golden Flower, and a thicker Leaf.

3. VERBASCUM *foliis viridibus, annuum, floribus luteis*. H. L. Annual Mullein, with green Leaves, and yellow Flowers.

4. VERBASCUM *nigrum Dioscoridis*. Lob. Icon. Black Mullein of Dioscorides.

5. VERBASCUM *Alpinum perenne nigrum, flore albo, staminibus purpureis*. H.R.Par. Black perennial Mullein of the Alps, with a white Flower, and purple Chives.

6. VERBASCUM *ramosum, floribus albis parvis*. Mor. H. R. Blasf. Blanching Mullein, with small white Flowers.

7. VERBASCUM *Creticum spinosum frutescens*. Tourn. Cor. Shrubby and thorny Mullein of Crete.

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8. VERBASCUM *Græcum fruticosum, folio sinuato candidissimo*. Tourn. Cor. Shrubby Mullein of Greece, with a very white indented Leaf.

9. VERBASCUM *orientale maximum candidissimum, ramis candelabrum æmulantibus*. Tourn. Cor. The greatest and whitest eastern Mullein; with Branches resembling a Candlestick.

10. VERBASCUM *orientale, conyzæ folio, flore micante, è ferrugineo ad aureum colorem vergente*. Tourn. Cor. Eastern Mullein, with a flea-bane Leaf, and a shining Flower, from an iron inclining to a gold Colour.

11. VERBASCUM *orientale, betonica folio, flore magno*. Tourn. Cor. Eastern Mullein, with a Betony-leaf, and a larger Flower.

12. VERBASCUM *orientale angusto oblongo folio*. Tourn. Cor. Eastern Mullein, with an oblong and narrow Leaf.

13. VERBASCUM *orientale, foliis subrotundis candidissimis*. Tourn. Cor. Eastern Mullein, with roundish white Leaves.

The six first-mentioned Sorts are very hardy Plants, which grow wild in several Parts of Europe, but are preserved in the Gardens of curious Botanists for the sake of Variety.

The seventh Sort grows in the Island of Crete in the Archipelago, where it rises to the Height of three Feet, having a woody Stem; and divides into many Branches, which are armed with Thorns towards their Extremities. The Leaves are oblong, narrow, and sinuated like those of the Wild Rocket, but are very white and woolly. The Flowers are produced near the Extremity of the Branches, which are of a yellow Colour, resembling those of the Wall-flower; from whence some Authors have named it *Leucoium spinosum*, i. e. prickly Gilliflower.

The eighth Sort is very like the seventh, which is described in the former Volume of the *Gardeners Dictionary*; but Dr. Tournefort, who found this in the Archipelago, thinks it to be different, because it has not degenerated in the Royal Garden at Paris, as the other Sort commonly will do, when it has been cultivated two or three Years in a Garden. This Sort seldom continues longer than two or three Years before the Roots perish.

The ninth, tenth, eleventh, twelfth and thirteenth Sorts, were discovered by Dr. Tournefort in the Levant; from whence he sent their Seeds to the Royal Garden at Paris. All these Sorts are hardy enough to thrive in the open Air in England, provided they are sown on a dry undunged Soil; for when they grow on a moist Soil, their Roots are subject to rot in the Winter; and if the Ground is enriched with Dung, it causes the Plants to grow so rank in Autumn, that they are in Danger of being destroyed by hard Frost.

All these Plants are propagated by Seeds, which should be sown on a Bed of light fresh Earth, in an open Situation. The best Time to sow these Seeds, is in Autumn, soon after they are ripe; when they will more certainly grow, than if they are sown in the Spring: and when they are sown early in the Autumn, the Plants will flower the following Summer,

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by which there will be a Year saved. These Seeds should be sown in Drills, which should be made about eighteen Inches asunder, because it will be proper to let some of the Plants remain to flower in the Seed-bed, where they will grow much stronger than those which are transplanted; when the Plants come up, they should be kept clean from Weeds; and about *Michaelmas* some of the Plants should be carefully drawn out, where they grow too close together, which may be transplanted out into a Nursery-bed to get Strength; and afterward they may be removed and planted about in Wilderness Quarters; where (if they are not too much over-shaded by Trees) they will thrive and flower very well, and make an agreeable Variety. Those Plants which are left in the Seed-beds to flower, should be singled out to a Foot or more Distance in the Rows; otherwise they will not have Room to spread.

There are very few of the Mulleins which are planted in Gardens for Ornament; because several of the Sorts grow wild in *England*, for which Reason many Plants are rejected, and meaner Sorts are cultivated, because they are more rare: but in large Gardens, where there are many Wilderness Quarters, these Plants are very proper Furniture, because they require very little Care to cultivate them, and they continue a long time in Flower; and tho' they do not make so fine an Appearance as some other Plants, yet for the agreeable Scent of their Flowers, which resemble the Violets, they deserve a Place much better than many other Plants which are cultivated in Gardens.

The seventh Sort being tenderer than any of the others, some of the Plants should be planted in Pots, filled with fresh light Earth, that they may be sheltered under a Hot-bed Frame in Winter, where they should have as much free Air as possible in mild Weather, and covered only in very hard Frost. The other Plants may be planted on a dry Soil in a warm Situation, where they will endure the Cold of our ordinary Winters very well.

VERBENA, Vervain.

To this Article must be added;

1. VERBENA *tenuifolia*. C. B. P. Narrow-leav'd Vervain.

2. VERBENA *urticae folio longiore serrato*. Houst. American Vervain, with a longer sawed Nettle-leaf.

3. VERBENA *Bonariensis altissima, lavedulae Canariensis spica multiplici*. Hort. Elth. The tallest Vervain of *Buenos Ayres*, with many Spikes resembling the *Canary Lavendar*.

4. VERBENA *Carolinensis, melissae folio aspero*. Hort. Elth. *Carolina* Vervain, with a rough Balm-leaf.

5. VERBENA *Mexicana, trachelii folio, fructu aparines*. Hort. Elth. *Mexican* Vervain, with a throatwort Leaf, and a Fruit like Goose-grass.

The first Sort here mentioned is equally as hardy as the common Vervain, from which

it only differs in having narrower Leaves; so is never admitted in Gardens, unless for the sake of Variety.

The second Sort was discovered by the late Dr. *William Houstoun* in *Jamaica*, from whence he sent the Seeds into *England*. This is a biennial Plant, which commonly perishes soon after it has perfected its Seeds.

The third Sort was brought from *Buenos Ayres*. This Plant grows to the Height of five or six Feet or more, and produces its Flowers at the Extremity of the Branches in many slender Spikes, which are placed close together, somewhat like the *Canary Lavendar*. These Flowers are small, and of a blue Colour.

The fourth Sort is a Native of *Carolina*. This is a much humbler Plant, for it rarely rises above two Feet and a half high. This produces its Flowers in Spikes like the common Sort.

The fifth Sort was brought from *Mexico*. This commonly grows about three Feet high or more; and generally produces three Spikes from a Joint at the Extremity of the Branches. The Flowers are Male and Female on the same Spike. The female Flowers produce their Seeds covered with the Empalement, which swells into a roundish Form, so as to appear somewhat like the Seeds of Goose-grass or Clivers.

The second, third and fifth Sorts, are tender Plants, which may be propagated by Seeds, and should be sown on a Hot-bed early in the Spring; but when the Plants are come up, they must have a good Share of free Air admitted to them in warm Weather; otherwise they will draw up too weak: they must also be often refreshed with Water. When the Plants have obtained some Strength, they should be transplanted on another moderate Hot-bed, observing to shade them until they have taken new Root; after which time they must have Air and Moisture in warm Weather in great Plenty, which will strengthen the Plants. About the Beginning of *June*, the Plants should be carefully taken up with Balls of Earth to their Roots, planted into Pots filled with fresh light Earth, and then plunged into a very moderate Hot-bed, where they should be screened from the Sun until they have taken new Root; and then they should be inured to the open Air by Degrees; for in *July* they may be removed out of the Hot-bed, and placed in a warm sheltered Situation, where they may remain till the Middle or latter End of *September*, when they must be removed into the Stove; where, if they have a moderate Degree of Warmth in Winter, and are duly supplied with Water, the Plants may be preserved, and the following Summer they will produce Flowers; and if the Season proves favourable, they will perfect their Seeds in Autumn.

The third Sort is much more hardy than those last-mentioned, so may be sown on a Bed of light Earth in a warm Situation, about the Middle of *March*; and when the Plants are come up, they must be constantly kept clean from Weeds, until they are strong enough

enough to transplant; when they must be carefully taken up, and some of them planted into small Pots filled with fresh light Earth, and placed in a shady Situation, until they have taken new Root: then they may be placed in an open Situation with other hardy exotic Plants, where they may remain during the Summer Season; but in Winter they must be sheltered from severe Frost. The other Plants may be planted in a warm Border, where they will endure the Cold of our ordinary Winters without Covering, but in hard Winters these are sometimes destroyed; for which Reason, it will be proper to have some of the Plants in Pots, in order to preserve the Kind. This Sort flowers and produces good Seeds in this Country, but the Roots seldom continue above two or three Years.

VERONICA, Speedwell, or Fluellin.

To this Article must be added;

1. VERONICA *mas repens Pyrenaica*, folio longiori glabro. Schol. Bot. Male creeping Pyrenean Speedwell, with a longer smooth Leaf.
2. VERONICA *mas erecta*. C. B. P. Male upright Speedwell.
3. VERONICA *spicata*, flore purpureo. Mor. Hort. Reg. Blæf. Spiked Speedwell, with a purple Flower.
4. VERONICA *spicata minor*. C. B. P. Smaller spiked Speedwell.
5. VERONICA *Alpina frutescens*. C. B. P. Shrubby Speedwell of the Alps.
6. VERONICA *Alpina fruticans*, serpilli minoris folio circinato. Pluk. Phyt. Shrubby Speedwell of the Alps, with a round lesser Mother-of-Thyme-leaf.
7. VERONICA *frutescens durior*, oblongo chamædryos folio, Patavina. Bocc. Mus. Harder shrubby Speedwell of Padua, with an oblong Germander-leaf.
8. VERONICA *Austriaca foliis tenuissimè laciniatis*. Inst. R. H. Austrian Speedwell, with Leaves finely jagged.
9. VERONICA *maxima*. Lugd. The greatest Speedwell, or false Germander.
10. VERONICA *maxima Pyrenaica*, non ramosa. Inst. R. H. The greatest unbranched Speedwell of the Pyrenean Mountains.
11. VERONICA *major frutescens altera*. Mor. Hist. Another greater shrubby Speedwell, or false Germander.
12. VERONICA *supina*, facie teucrii pratensis. Lob. Icon. Low Speedwell, with the Face of Meadow-germander.
13. VERONICA *longifolia Virginiana altissima*, foliis ternis profunde serratis caulem amplexantibus, spicâ multiplici cæruleâ. Royen. The tallest long-leav'd Virginian Speedwell, with deeply-sawed Leaves embracing the Stalks, and many Spikes of blue Flowers.
14. VERONICA *minor angustifolia ramosior & procumbens*. Mor. Hist. Oxon. Small narrow-leav'd branching and trailing Speedwell.
15. VERONICA *aquatica major*, folio subrotundo. Mor. Hist. Greater Water Speedwell, with a roundish Leaf, commonly called Brooklime.

16. VERONICA *aquatica, angustiore folio*. Inst. R. H. Narrow-leav'd Water Speedwell, or Brooklime.

17. VERONICA *aquatica minor, folio subrotundo*. Inst. R. H. Lesser Water Speedwell, with a roundish Leaf.

18. VERONICA *aquatica major, folio oblongo*. Mor. Hist. Greater Water Speedwell or Brooklime, with an oblong Leaf.

19. VERONICA *aquatica minor, folio oblongo*. Mor. Hist. Small Water Speedwell, with an oblong Leaf.

20. VERONICA *Constantinopolitana incana, chamædryos folio*. Tourn. Cor. Hoary Speedwell of Constantinople, with a Germander-leaf.

21. VERONICA *orientalis, foliis bederae terrestres, flore magno*. Tourn. Cor. Eastern Speedwell, with Ground-ivy-leaves, and a large Flower.

22. VERONICA *orientalis erecta, gentianellæ foliis*. Tourn. Cor. Upright eastern Speedwell, with small Gentian-leaves.

23. VERONICA *orientalis elatior, gentianellæ foliis, flore majore albido*. Tourn. Taller eastern Speedwell, with small Gentian-leaves, and a larger white Flower.

24. VERONICA *orientalis minima, foliis laciniatis*. Tourn. Cor. The least eastern Speedwell, with jagged Leaves.

25. VERONICA *orientalis, telephii folio*. Tourn. Cor. Eastern Speedwell, with an Orpine-leaf.

26. VERONICA *major frutescens altera, foliis constanter & eleganter variegatis*. Boerb. Ind. alt. The other great shrubby Speedwell, with Leaves constantly and beautifully variegated.

27. VERONICA *Americana erecta, foliis gramineis, floribus ex foliorum alis*. Houst. Upright American Speedwell, with grass Leaves, and Flowers coming out of the Wings of the Leaves.

28. VERONICA *fruticosa erecta dulcis, hexangulari caule, flore dilute cæruleo*. Sloan. Cat. Wild Liquorish, or Sweet-weed.

29. VERONICA *caule hexangulari, foliis satyriæ ternis serratis*. Sloan. Cat. Speedwell with an hexangular Stalk, and saw'd Savory Leaves growing by Threes.

30. VERONICA *quæ scordium maritimum, fruticosum procumbens flore cæruleo*. Sloan. Cat. Houst. Shrubby trailing maritime Speedwell, or Scordium, with a blue Flower.

The fourteen Sorts which are first mentioned, are very hardy abiding Plants, and may be propagated either by Seeds, or parting of their Roots. If propagated by Seeds, they should be sown on an open Bed of fresh Earth in March, and in April the Plants will come up, when they must be kept clear from Weeds; and if the Season should prove very dry, if they are watered two or three times a Week, it will cause them to make a great Progress. Where the Plants come up too close together, some of them should be drawn up, and transplanted into Nursery-beds, where they should be shaded and watered until they have taken new Root; and then they will require no farther Care, but to keep them clean from Weeds until

until *Michaelmas*, when they will be fit to transplant out where they are designed to remain for good. All these Sorts are very proper to plant on the Side of sloping Banks; or in wilderness Quarters under Trees, where they will flower a long time, and make an agreeable Variety.

The thirteenth Sort is a Plant of larger Growth than the others: this commonly rises four or five Feet high, if it is planted on a good Soil; and produces fine Spikes of blue Flowers, which in a cool Season, or when they grow on a moist Soil, and in a shady Situation, will continue in Beauty a long time; for which it may deserve a Place in every good Garden.

These Plants may also be propagated by parting of their Roots, which may be done every third Year; for if they are too often parted, or divided into small Heads, they will not make any Figure, because when they have not a Number of Stems, so as to form a good Bunch, they are soon past their Beauty, and have but a mean Appearance. The best Time to part these Roots is at *Michaelmas*, that they may be well rooted again before Winter; for when they are removed in the Spring, they seldom flower strong the same Year, especially if the Season should prove dry. Those Sorts which grow pretty tall, are very proper to plant under large Trees, in open wilderness Quarters; but those trailing Branches are fit for the Sides of Banks, or irregular shady Slopes, where they will make an agreeable Variety.

The fifteenth Sort is used in Medicine, being accounted a very good Antiscorbutic; it is stiled *Becabunga* in the Dispensatory, and in *English Brooklime*. It is very common in standing Waters, in most Parts of *England*, so is seldom admitted into Gardens.

The sixteenth, seventeenth, eighteenth and nineteenth Sorts, grow in standing Waters, so are only preserved in some Botanic Gardens for the sake of Variety. These may be easily propagated by taking the Plants from the Places of their natural Growth, and putting them on the Surface of shallow standing Waters, where they will soon strike out their Roots, and multiply exceedingly.

The other six Sorts next mentioned were discovered by Dr. *Tournefort* in the *Levant*, from whence he sent their Seeds to the Royal Garden at *Paris*: these are all of them hardy Plants, so will thrive in the open Air. They may be propagated by Seeds in the same manner as the Sorts above-mentioned, and deserve a Place in good Gardens for their Variety.

The twenty-sixth Sort is preserved in Gardens for the sake of its beautiful variegated Leaves, which make a pretty Appearance in the Winter. This may be propagated by parting of the Roots, or from Slips taken off in the Spring, and planted in a shady Border, which if duly watered, will take Root; and the *Michaelmas* following they may be transplanted where they are designed to remain.

The twenty-seventh Sort was discovered by the late Dr. *Houftoun* at *La Vera Cruz*, from

whence he sent the Seeds to *England*. This is a low annual Plant, which seldom rises above four or five Inches high. The Flowers are produced from the Wings of the Leaves, and are very small and white. This grows on sandy Ground, where the Seeds scatter, and the Plants come up in plenty.

The twenty-eighth, twenty-ninth and thirtieth Sorts, grow plentifully in the Island of *Jamaica*, from whence they have been brought into *Europe*, and are preserved in several curious Botanic Gardens, for the sake of Variety. All these being Plants natural to hot Countries, are too tender to thrive in the open Air in *England*: so their Seeds should be sown on a Hot-bed early in the Spring; and when come up, each Plant should be transplanted into a separate small Pot, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them until they have taken new Root; and then they may be treated in the same manner as is directed for the *Samoloides*, with which Management they will flower, and perfect their Seeds in *England*.

I cannot omit mentioning the Virtues of the common Speedwell, which have caused it to be in great Request of late. It is found an excellent Remedy for the *Gout*, and all Rheumatic Disorders. The Method is to make a Tea of the dried Herb, the Quantity to be used is about a quarter of an Ounce, from which four common Dishes of Tea may be drawn: these are to be drank every Morning, until the Patient finds Relief. To this some add the dried Herbs of *Bog-bean* and *Ground-pine*, which they mix in equal Quantities, and make a Tea of them, from which many Persons have received great Benefit.

VIBURNUM, Way-faring, or Pliant Mealy Tree.

To this Article must be added;

1. VIBURNUM *Carolinianum*, floribus purpurascens ex alis foliorum. *Carolina* Way-faring-tree, with purplish Flowers, coming out from the Wings of the Leaves.

2. VIBURNUM *Americanum latifolium*, floribus albis, ramulis tomentosis. Broad-leav'd *American* Way-faring-tree, with white Flowers, and woolly Branches.

The first Sort grows plentifully in *South Carolina* and *Georgia*, from whence the Seeds have been brought to *England*. This rises to the Height of eight or nine Feet, and divides into many Branches near the Ground. The Leaves which are produced by Pairs, are somewhat like those of the *European* Kind. The Flowers are produced in small Umbels from the Wings of the Leaves, which are of a purplish Colour. These are rarely succeeded by Fruit in *England*, because it is generally late in Summer before the Flowers appear; so that if the Autumn is not very favourable, the Flowers fall off without producing Seeds.

This Plant is hardy enough to live abroad in the open Air in *England*, provided it is planted in a sheltered Situation; for as it naturally grows in Woods, where it is sheltered from

from Cold by taller Trees, so if it is placed in an open Situation, it is often injured by severe Frosts. It is commonly propagated by Seeds, which are procured from the Countries of its natural Growth: they should be sown in Pots filled with fresh Earth early in the Spring, and then plunged into a Hot-bed of Tanners-bark. These Pots must be constantly watered every other Day, or at least twice a Week, according as the Earth dries; for if it is not kept pretty moist, the Seeds will remain a long time in the Ground, before they vegetate. When the Plants come up, they must be kept clean from Weeds, and in warm Weather should have a large Share of Air admitted to them, otherwise they will draw up very weak. They must also be duly watered, for they naturally grow on moist Places, and are pretty droughty Plants. About the middle of *June*, they must be inured to the open Air by Degrees. In *July* the Pots should be taken out of the Hot-bed, and placed in a sheltered Situation in the open Air; where they may remain till *October*, when the Pots should be placed under a common Hot-bed Frame, where the Plants may be covered in frosty Weather; but when the Weather is mild, they should be exposed as much as possible. This Plant sheds its Leaves in Autumn; and the latter End of *March*, or the Beginning of *April*, it puts out new Leaves; so should be transplanted, just before the Buds begin to come out. Some of them should be planted into separate small Pots filled with fresh light Earth; and the others may be put into a warm Border of fresh light Earth, where they may remain two Years to get Strength; and then they may be removed to the Places where they are designed to remain. Those which are potted, should be plunged into an old Bed of Tanners-bark, and covered either with Mats or Glasses, until they have taken new Root; and then they may be placed in the open Air with other hardy Exotics, where they may remain during the Summer Season; but in Winter they should be sheltered under a Hot-bed Frame as before. When they have obtained Strength, they may be shaken out of the Pots, and planted in wilderness Quarters, reserving two or three Pots to be sheltered in Winter, for fear those abroad should be destroyed by severe Frost.

These Plants may also be propagated by laying down of the young Branches, in the same manner as is practised for the common Sort. The best Time for laying them down, is in *March*, just before the Leaves come out. If these are duly watered in dry Weather, they will be sufficiently rooted by the following Spring, when they may be taken off, and treated in the same manner as the seedling Plants.

The second Sort is very tender. The Seeds of this Kind were sent from *Campechy* by Mr. Robert Millar, who found the Plants growing in low marshy Places in great Plenty. This Sort rises to the Height of eight or ten Feet, and has broader Leaves than the common Sort, which are (while young) covered pretty thick

with a soft white Down; but as the Leaves grow older, their upper Sides are greener, and lose most of the Down. The young Branches are also very woolly; but as these grow older, it falls off. The Flowers are produced from the Wings of the Leaves in large Bunches, which are white; but the Apices or Summits are of a red Colour, which at a small Distance appears like Stripes in the Flowers. After the Flowers are decayed, the Fruit appears, which, when ripe, turns black.

This Plant may be propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, and fit to transplant, they should be each planted into a separate small Pot filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark, observing to shade them from the Sun until they have taken new Root, when they should have free Air admitted to them every Day in proportion to the Warmth of the Season; and as they are Plants which delight in low marshy Places, so they must be constantly supplied with Water in hot Weather, otherwise they will not thrive. When they have filled the small Pots with their Roots, they should be shaken out, and their Roots trimm'd, and then put into Pots a Size larger; but they must be plunged again into the Hot-bed, because while they are young, they will not thrive, if they are too much exposed to the open Air; tho' in warm Weather the Glasses should be every Day raised with Stones, to admit fresh Air, otherwise they will draw up too weak. At *Michaelmas* they should be removed out of the Hot-bed, and plunged into the Bark-bed in the Stove, where they should be kept in a moderate Temperature of Heat, and must be frequently watered; in which Stove they will retain their Leaves all the Year, and make considerable Progress; so that in two Years from sowing, they will produce Flowers and Fruit.

As these Plants grow older and stronger, so they may be treated more hardily: therefore they may be placed in a dry Stove in Winter; and in the Middle of Summer may be exposed abroad in a warm sheltered Situation, with other tender exotic Plants, observing in dry Weather to water them duly, and to shift them into other Pots, as they shall require it: with which Management they will produce their Flowers every Year toward the End of Summer; and if the Autumn proves very favourable, or the Plants are early removed into the Stove, they will perfect their Seeds very well.

This Sort may also be propagated by Layers, as the other; but when the Shoots are laid down, it will be proper to plunge the Pots into a moderate Hot-bed of Tanners-bark, which will cause them to put out Roots much sooner than when they are exposed abroad. The Layers, when sufficiently rooted, may be taken off, and planted into separate Pots, and treated in the same manner as the seedling Plants.

VICIA, Vetch or Tares.

To this Article must be added ;

1. *VICIA maxima dumetorum*. C. B. P. Bush or perennial Vetch.

2. *VICIA sepium folio rotundiore acuto, semine nigro*. C. B. P. Bush Vetch, with a rounder sharp-pointed Leaf, and a black Seed.

3. *VICIA vulgaris, acutior folio, semine parvo nigro*. C. B. P. Wild Vetch, with a sharper pointed Leaf, and a small black Seed.

4. *VICIA perennis incana multiflora*. Bot. Monsp. Hoary perennial Vetch, with many Flowers.

5. *VICIA perennis multiflora, majori flore caeruleo, ex albo mixto*. Bot. Monsp. Tufted perennial Vetch, with a large blue Flower mix'd with white.

6. *VICIA perennis multiflora incana, insularum Stæchadum*. Inst. R. H. Perennial hoary tufted Vetch of the Stæchades.

7. *VICIA sylvestris hirsuta incana*. C. B. P. Hoary rough wild Vetch.

8. *VICIA sylvestris incana, major & præcox, Parisiensis, flore suave-rubente*. Inst. R. H. The greater early hoary wild Vetch, with a soft red Flower.

9. *VICIA sylvatica maxima, piso sylvestri similis*. J. B. The greatest wild Vetch, resembling wild Pease.

10. *VICIA sylvestris lutea, filiqua hirsuta*. C. B. P. Wild yellow Vetch, with hairy Pods.

11. *VICIA serotina perennis, flore luteo, filiqua hirsuta*. Inst. R. H. Late-flowering perennial Vetch, with a yellow Flower, and a hairy Pod.

12. *VICIA serotina perennis, flore luteo, filiqua glabra*. Inst. R. H. Late-flowering perennial Vetch, with a yellow Flower, and smooth Pod.

13. *VICIA sylvestris lutea, cum galea fusca*. J. B. Wild yellow Vetch, with a brown Standard.

14. *VICIA Cretica multiflora latifolia, flore intense purpureo*. Tourn. Cor. Broad-leav'd many-flower'd Vetch of Crete, with a deep purple Flower.

15. *VICIA orientalis multiflora incana, angustissimo folio*. Tourn. Cor. Hoary eastern tufted Vetch, with a very narrow Leaf.

16. *VICIA verna villosissima & incana, flore parvo spicato, ex purpureo ad ianthinum vergente*. Tourn. Cor. The most hairy and hoary spring Vetch, with a small spiked Flower, from a purple to a violet Colour.

17. *VICIA multiflora spicata, floribus albidis, calyce purpureo*. Tourn. Cor. Spiked tufted Vetch, with whitish Flowers, and a purple Empalement.

18. *VICIA orientalis multiflora argentea, flore variegato*. Tourn. Cor. Eastern tufted silvery Vetch, with a variegated Flower.

19. *VICIA orientalis, flore maximo pallescente, maculâ luteâ notato*. Tourn. Cor. Eastern Vetch, with a large pale Flower spotted with Yellow.

20. *VICIA multiflora Cassubica frutescens, lentis filiqua*. Breyn. Prod. Shrubby tufted Vetch, with Pods like Lentils.

21. *VICIA sylvatica multiflora maxima*. Phyt. Brit. The greatest tufted wood Vetch.

22. *VICIA segetum, cum filiquis plurimis hirsutis*. C. B. P. Small wild Tare, with many rough Pods.

23. *VICIA segetum, singularibus filiquis glabris*. C. B. P. Corn Vetch, or fine Tare, with single smooth Pods.

24. *VICIA minima, cum filiquis glabris*. Inst. R. H. The smallest Vetch, with smooth Pods.

25. *VICIA sive cracca, foliis & filiquis longioribus*. Bot. Monsp. Vetch with longer Leaves and Pods.

26. *VICIA minima præcox, Parisiensium*. H. R. Par. The least early Vetch, with an angular Seed.

The first, third and tenth Sorts, here enumerated, grow wild in this Kingdom. The first is very common in shady Woods, and on the Sides of Banks under Trees, in most Parts of England. The third Sort is found on Shotover Hill, and in some other Places in England. And the tenth grows on Glastenbury-thorn-bill, in Somersetshire.

The second, fourth, fifth, seventh, ninth, eleventh, twelfth and thirteenth Sorts, grow wild in Germany, France and Italy, but are not Natives of this Country. These are all of them abiding Plants, whose Roots continue several Years ; but their Shoots die down in Autumn, and fresh ones come out the following Spring ; some of which will rise to the Height of five or six Feet, and trail over Bushes, or whatever Plants they grow near ; so that they must be supported, otherwise they will appear very unsightly.

These may be propagated by Seeds, which may be sown in Drills on a Border of fresh Earth, exposed only to the morning Sun. The best Time for sowing these Seeds is in March, and when the Plants come up, they must be kept clean from Weeds ; and where they are too close together, some of them should be drawn up to give Room for the remaining ones to grow strong. This is all the Culture they require till Michaelmas, when their Shoots will decay ; at which time the Roots should be carefully taken up, and transplanted where they are designed to remain, which should be under Trees, and in other shady wilderness Quarters ; where, if they are rightly disposed, they will thrive extremely well, and make an agreeable Variety.

The sixth Sort grows wild in the Stæchades Isles, from whence the Seeds have been obtain'd by some curious Persons, who preserve the Sort for the sake of Variety ; as is also the eighth Sort, which is found wild in the Neighbourhood of Paris.

The fourteenth, fifteenth, sixteenth, seventeenth, eighteenth and nineteenth Sorts, were discovered by Dr. Tournefort in the Levant, from whence he sent their Seeds to the Royal Gardens at Paris. These, tho' they are Natives of warmer Countries than England, yet will thrive very well in the open Air ; so may be admitted into Gardens for the sake of Variety.

The twentieth Sort is also an abiding Plant, whose Shoots decay every Autumn, and fresh ones

ones are produced in the Spring. This Sort should have a moist shady Situation, in which the Shoots will rise five or six Feet high, and produce great Quantities of Flowers; so will afford an agreeable Variety in some obscure Places, where few better Plants will thrive.

The twenty-first Sort grows wild in some Woods in the North of *England*, as also in *Oxfordshire*. This is also an abiding Plant, which should be treated in the same manner as the former Sort.

As all these Sorts of Vetches grow near Bushes, or under Hedges, on which they climb, and are thereby supported from trailing on the Ground, so whenever they are brought into Gardens, they should be planted in the like Situation: for if they trail on the Ground, they will run over whatever Plants grow near them, and make a bad Appearance; whereas, if they are planted near any ordinary Shrubs, over which they may be allowed to ramble, their Flowers will appear scattering amongst the Branches of the Shrubs, and afford an agreeable Variety.

The twenty-second, twenty-third, twenty-fourth and twenty-fifth Sorts, are annual Plants, which grow too plentifully amongst the Corn, so as to become very troublesome Weeds in some Parts of *England*; therefore should be rooted out in the Spring, before their Seeds ripen: for if any of them are permitted to stand until their Seeds are ripe, the first hot Day after, the Pods will burst, and cast their Seeds to a great Distance, so as to fill the Ground with young Plants in Autumn. These Plants always come up in Autumn, and abide the Winter, during which time they do not appear as if they would ever become large enough to injure the Crop, amongst which they grow; but in the Spring they will send forth many lateral Shoots, so as to spread to a considerable Distance; and by their Tendrils will fasten themselves to the Stalks of Corn, or any other Plants, and thereby greatly weaken them; and sometimes, where these Weeds are in Plenty, and the Corn but weak, they will ramp quite over it, and thereby almost destroy it. The best Time to extirpate these Weeds is in *March* or *April*, when, if they are cut up with a Spadde in dry Weather, they will in a Day or two be effectually destroyed, so as not to recover; and if this be repeated two or three Seasons, it will entirely clear the Land of them.

The twenty-sixth Sort is a very small annual Plant, which grows wild on chalky Hills in some Parts of *England*, but particularly near *Greenhithe* in *Kent*. It flowers the Beginning of *April*, the Seeds are ripe in *May*, and the Plant soon after perishes; so that whoever is desirous to find it, must search for it while it is in Vigour; otherwise it is so small, that it can hardly be discovered. If this Plant is designed to be preserved in a Garden, the Seeds should be sown early in Autumn, that the Plants may get Strength before Winter; for when they are sown in the Spring, they seldom succeed. When they are once established in a Garden, and their Seeds permitted to scatter,

they will maintain themselves better than if sown by Hand; and will require no other Care but to keep them clear from Weeds.

There are some of the larger Kinds of these Vetches, as well worth cultivating in the Fields as the common *Tare*, and will serve for the same Purposes; especially the second, third and ninth Sorts, which grow large, and afford a good Quantity of Seeds. These may all be cultivated in the same manner as the common Sort, and are equally hardy.

The usual Time for sowing of Vetches or Tares, is in the Spring, about the Middle of *February*; but from several Experiments which I have made, I find it to be a much better Method to sow them in Autumn; for as they are hardy enough to resist the Frost in Winter, so they will get Strength early in the Spring, and will grow considerably larger than those which are sown in the Spring, and will produce a larger Quantity of Seeds, which will ripen early in Summer, so may be gathered in before Wheat Harvest.

The Sorts of Vetches which are cultivated for Use in the open Fields, should be sown in Drills, after the same manner as is practised for Pease. These Drills should be a Foot and half or two Feet asunder, that there may be Room for the Houghing Plough to go between them, in order to destroy the Weeds, and to earth the Plants. These Drills should be about the same Depth as those usually made for Pease, and the Seeds should be scattered about the same Distance in the Drills. These Seeds should be carefully covered as soon as they are sown; for if they are left open, the Rooks will discover them; so that where they are not carefully watched, they will entirely devour them. Indeed these, being sown in Autumn, will be in less Danger than those which are sown in the Spring; because there is more Food for Rooks and Pigeons in the open Fields at this Season; and the Plants will appear much sooner above Ground. The best Time to sow them is, about the Beginning of *September*; for the Rains which usually fall at that Season, will bring them up in a short time. Toward the latter End of *October*, the Plants will have obtained considerable Strength; so should then be earthed up with the Houghing Plough. This Work should be performed in dry Weather, and in doing of it Care must be had to lay the Earth up as high to the Stems of the Plants as possible, so as not to cover their Tops; because this will secure them against Frost. The whole Space of Ground between the Rows should also be stirred, in order to destroy the Weeds, which if carefully performed in dry Weather, will lay the Land clean till *March*; at which time the Crop should be earthed a second time, and the Ground clean'd again between the Rows; which will cause the Plants to grow vigorous, and in a little time they will spread so as to meet and cover the Spaces; whereas those sown in the Spring will not grow to half this Size, and will be very late in flowering.

Some

Some People sow these Vetches, and when they are fully grown, plough them into the Ground, in order to manure it. Where this is designed, there will be no Occasion to sow them in Drills at this Distance, nor to husband them in the manner before directed; but in this Case it will be the best Method to sow them in Autumn, because they will be fit to plough in much sooner the following Year, so that the Land may be better prepared to receive the Crops for which it is intended. In some Parts of France, and in Italy, these Vetches are sown for feeding of Cattle while green, and are accounted very profitable; but in those Countries Grass is more scarce than in England, so that I think it would not answer to sow them for this Purpose here.

Where these Plants are cultivated for their Seeds, they should be cut soon after the Pods change brown; and when they are dry, they must be immediately stack'd; for if they are suffered to lie out in the Field to receive Wet, and there comes one hot Day after it, the Pods will most of them burst, and cast out the Seeds. When the Seeds are thrashed out, the Haulm is esteemed very good Food for Cattle, and some have recommended the Seeds for Horses, and affirm they are as proper for those Animals as Beans; which if true, will render them more valuable, because these will grow on the lightest sandy Land, where Beans will not thrive; so may be a good Improvement to some Counties in England, where they do not attempt to cultivate Beans.

The perennial Sorts are not proper to cultivate in the Fields, because they are of slower Growth than the annual Kinds; for they make but little Progress the first Year they are sown, and most of them delight in shady Places, and to grow under Bushes on which they can ramp; so that when they grow in the open Ground, their Branches trail; and in wet Weather, if they are close together, they will rot. So that the annual Kinds of large Growth are such as should be prefer'd for sowing. But of all the Sorts, there is not one so good, as that with white Seeds, mentioned in the former Volume of the Dictionary.

VIOLA, The Violet.

To this Article must be added;

1. *VIOLA Martia hortensis, foliis amplioribus.* C. B. P. Garden March Violet, with larger Leaves.
2. *VIOLA Martia inodora sylvestris, foliis mucronatis, oblongis & strictioribus.* C. B. P. Dog's Violet, with oblong and narrow pointed Leaves.
3. *VIOLA Martia sylvestris æquatè cærulea, folio & flore minore.* Hort. Cath. Blue wild Violet, with a smaller Leaf and Flower.
4. *VIOLA Martia, multiplici flore rubello.* C. B. P. March Violet, with a double reddish Flower.
5. *VIOLA Martia, multiplici flore ex albo & purpureo variegato.* C. B. P. March Violet, with a double Flower, variegated with White and Purple.

6. *VIOLA Martia multiplex, flore cinereo.* H. R. Par. Double March Violet, with an ash-coloured Flower.
7. *VIOLA flore pleno maximo.* J. B. The largest double Violet.
8. *VIOLA Martia intense purpurea, flore minore pleno.* J. B. March Violet, with a small double Flower, of a deep purple Colour.
9. *VIOLA palustris rotundifolia glabra.* Mor. Hist. Smooth round-leav'd marsh Violet.
10. *VIOLA Alpina, folio in plures partes dissecto.* C. B. P. Alpine Violet, with a Leaf cut into many Parts.
11. *VIOLA Alpina purpurea, exiguis foliis.* C. B. P. Purple Violet of the Alps, with small Leaves.
12. *VIOLA Alpina rotundifolia lutea.* C. B. P. Yellow Violet of the Alps, with a roundish Leaf.
13. *VIOLA montana pumila angustifolia, flore niveo inodoro.* C. B. P. Mountain dwarf narrow-leav'd Violet, with a snow-white Flower without Smell.
14. *VIOLA Martia arborescens lutea.* Tabern. Icon. Yellow tree-like March Violet.
15. *VIOLA montana tricolor odoratissima.* C. B. P. The most sweet smelling three-coloured mountain Violet.
16. *VIOLA montana alba grandiflora.* C. B. P. Great flower'd white mountain Violet.
17. *VIOLA montana lutea, subrotundo crenato folio.* Barr. Icon. Yellow mountain Violet, with a roundish notch'd Leaf.
18. *VIOLA montana cærulea grandiflora.* H. R. Par. Great flower'd blue mountain Violet.
19. *VIOLA montana lutea, foliis non crenatis.* C. B. P. Yellow mountain Violet, with Leaves not notch'd.
20. *VIOLA montana tricolor, flore variegato.* Inst. R. H. Three-coloured mountain Violet, with a strip'd Flower.
21. *VIOLA Hispanica fruticosa longifolia.* Inst. R. H. Long-leav'd shrubby Spanish Violet.
22. *VIOLA Pyrenaica, longius caudata, teucrii folio.* Inst. R. H. Pyrenean Violet, with a long Tail, and a tree-germander Leaf.
23. *VIOLA Aetnica erecta bicolor hirsuta minima elatior ac ramosior.* Hort. Cath. Upright two-colour'd hairy very small Violet of Aetna, taller and more branching.
24. *VIOLA arvensis, flore toto luteo.* C. B. P. Field Violet, with a Flower all yellow.
25. *VIOLA cærulea maxima, cucumerinis hirsutis foliis, Virginiana.* Pluk. Phyt. The largest blue Violet of Virginia, with hairy cucumber Leaves.
26. *VIOLA maxima, cucumerinis hirsutis foliis, Virginiana, flore luteo.* Pluk. Alm. The largest Violet of Virginia, with hairy cucumber Leaves, and a yellow Flower.
27. *VIOLA Virginiana, platani ferè foliis, parvis & incanis.* Pluk. Mantiff. Virginian Violet, with small hoary Leaves, shap'd like those of the Plain-tree.
28. *VIOLA Cretica saxatilis lutea odoratissima, leucis foliis.* Tourn. Corn. Rock Violet of Crete,

Crete, with a very sweet yellow Flower, and wall-flower Leaves.

29. *VIOLA orientalis montana grandiflora, violacei coloris.* Tourn. Cor. Mountain eastern Violet, with a large Flower of a purple Colour.

30. *VIOLA Martia Virginiana minor, foliis longius mucronatis, flore purpureo, inodora.* Small Virginian Violet, with long-pointed Leaves, and a purple Flower without Smell.

These several Sorts of Violets, here enumerated, are preserved in some curious Gardens for the sake of Variety. They are all hardy enough to thrive in the open Air in England; but those Sorts which are Natives of the Alps, and other mountainous Places, must be planted in a shady Situation, and should have a pretty strong moist Soil, otherwise they will not thrive.

The first Sort differs from the common Violet, only in having larger Leaves, which may proceed from the Culture; for I have frequently observ'd, when the Roots of Violets have been gathered in the Woods, and brought into Gardens, that their Leaves have been greatly enlarged in one Year; but then they have not been so productive of Flowers as before.

The second, third, ninth, tenth, eleventh, twelfth, thirteenth, twenty-first, twenty-second, twenty-third, twenty-fourth, twenty-fifth, twenty-sixth, twenty-seventh and thirtieth Sorts, are Plants of no great Beauty, so are only preserved for the sake of Variety by some curious Persons; but the fourth, fifth, sixth, seventh and eighth Sorts, merit a Place in every good Garden, for the sake of their double Flowers, which are extremely sweet. The seventh Sort produces very large full Flowers, which are almost as large as the double Cinnamon-rose; so that they make a fine Appearance, and the Flowers are also very sweet. This Plant should be planted on a strong Soil in a shady Situation, where they will thrive and flower much better than in a rich Ground.

The fifteenth, sixteenth, seventeenth, eighteenth, nineteenth and twentieth Sorts, are also very pretty Plants; so may be allowed a Place on a North Border in the Flower-garden, for the sake of Variety. These are of the Kind of the Pansies or Hearts-ease, but their Flowers are much larger; and as their Roots abide several Years, so they may be propagated by parting of their Roots. The best Time for this Work is at Michaelmas, that they may be well rooted before Spring, otherwise they will not flower very strong the following Spring.

The twenty-eighth and twenty-ninth Sorts were discovered by Dr. Tournefort in the Levant. These, tho' they are Natives of warmer Countries, yet they will thrive very well in the open Air in England. These must also be planted in a shady Border, and in dry Weather they should be often watered, which will continue their Flowers a long time: for as these are also of the Pansy Kind, so they in like manner con-

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tinue to produce new Flowers, from the Wings of the Leaves, for at least two Months, if they are not stunted by Drought. The twenty-eighth Sort, having very sweet Flowers, well deserves a Place in curious Gardens.

VIRGA AUREA, Golden-rod.

To this Article must be added;

1. *VIRGA AUREA latifolia serrata.* C. B. P. Golden-rod with broad sawed Leaves.

2. *VIRGA AUREA montana, latiore folio glabro.* H. R. Par. Mountain Golden-rod, with a broad smooth Leaf.

3. *VIRGA AUREA montana, latiore folio hirsuto.* H. R. Par. Mountain Golden-rod, with a broad hairy Leaf.

4. *VIRGA AUREA Alpina, laurinis rigidioribus foliis.* Bocc. Mus. Alpine Golden-rod, with stiffer Bay-leaves.

5. *VIRGA AUREA major, foliis glutinosis & graveolentibus.* Inst. R. H. Greater Golden-rod, with clammy and stinking Leaves.

6. *VIRGA AUREA minor, foliis glutinosis & graveolentibus.* Inst. R. H. Smaller Golden-rod, with clammy and stinking Leaves.

7. *VIRGA AUREA major, foliis glutinosis & graveolentibus, gallas ferens.* Inst. R. H. Greater gall-bearing Golden-rod, with clammy and stinking Leaves.

8. *VIRGA AUREA Virginiana annua.* Zan. Annual Virginian Golden-rod.

9. *VIRGA AUREA Americana hirsuta, radice odorata.* Joncq. Rough American Golden-rod, with a sweet-smelling Root.

10. *VIRGA AUREA Marylandica caesia glabra.* Hort. Elth. Smooth Golden-rod of Maryland.

11. *VIRGA AUREA Americana annua graveolens, flore minimo, foliis conjugatis, & hyperici modo perforatis.* Houst. Annual stinking American Golden-rod, with a very small Flower, and Leaves growing by Pairs, which are perforated in the manner of St. John's-wort.

12. *VIRGA AUREA Americana, urticae foliis rugosis conjugatis & hirsutis, florum spicis foliosis.* Houst. American Golden-rod, with rough Nettle-leaves growing by Pairs, and the Spikes of Flowers set with small Leaves.

13. *VIRGA AUREA Americana fruticosa, salicis folio, floribus quasi umbellatis.* Houst. Shrubby American Golden-rod, with a Willow-leaf, and Flowers growing almost in an Umbel.

The first, second, third, fourth, ninth and tenth Sorts, are abiding Plants, which may be propagated by parting of their Roots, in the same manner as hath been directed for the Sorts enumerated in the former Volume of the *Gardeners Dictionary*. These Plants continue a long time in Flower, and appearing toward the latter Part of Summer, when there are few better Sorts in Beauty, are worthy of a Place in every large Garden, especially as they are very hardy, and require very little Care to cultivate them; for they will thrive in the Shade under Trees, and if they are taken up and parted every fourth Year, they will thrive and flower extremely well.

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The fifth, sixth and seventh Sorts, seldom continue longer than two or three Years, so should be often renewed. These may be increased by parting of their Roots; but the Plants which are thus parted, seldom thrive so well as those which are raised from Seeds; but as these Plants do not perfect their Seeds every Year in *England*, so the other Method must be practised to preserve the Kinds. The best Time for this Work is in the Autumn, that they may be well rooted before the Spring, otherwise they will not flower very strong. These Sorts should be planted on a loamy Soil on open Borders; for they will not thrive under the Drip of Trees.

The eighth Sort is an annual Plant of no great Beauty, which if permitted to scatter its Seeds, will become a Weed over the Garden. This Plant is now become a common Weed in the Fields in divers Parts of *England*; but it is generally believed, the Seeds were at first blown out of Gardens; for it was originally brought from *America*.

The eleventh, twelfth and thirteenth Sorts, were discovered by the late Dr. *Houftoun* at *La Vera Cruz*. These are tender Plants, so will not live in the open Air in *England*. They may be propagated by Seeds, which should be sown on a moderate Hot-bed early in the Spring; and when the Plants are come up, they should be transplanted into Pots filled with fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark; observing, after they have taken new Root, to admit a large Share of free Air to them every Day when the Weather is warm, as also to water them constantly every Day, for they naturally grow in moist Places. The eleventh Sort, which is an annual Plant, will flower toward the Middle of *June*, and the Seeds will ripen the End of *August*; when some of them should be sown to come up before Winter, because the Seeds will more certainly grow at this Season, than in the Spring, and the Plants will grow much stronger. The twelfth Sort is a biennial Plant, so it rarely flowers the first Season; therefore this, and the thirteenth Sort, (which is an abiding Plant) should be removed into the Stove at *Michaelmas*, and placed where they may have a temperate Degree of Warmth in Winter, in which they may be preserved; but they must be frequently refreshed with Water, tho' in very cold Weather it must not be given in great Quantities. With this Management the Plants will flower extremely well, and add to the Variety in the Stove.

VISNAGA, Spanish Picktooth.

The Characters are;

It is an umbelliferous Plant, with a rose-shap'd Flower, consisting of several Petals, which rest on the Empalement; which afterward becomes the Fruit, composed of two oblong furrowed Seeds. To these Notes must be added, The Leaves are finely divided like Fennel; and when the Flowers fall off, the Umbel contracts together.

The Species are;

1. VISNAGA seu Gingidium. Mor. Umb. Common Spanish Picktooth.

2. VISNAGA seu Gingidium Montis Libani. Munt. Plant. Greater Toothpick of Mount Libanus.

The first Sort grows plentifully in the South of *France*, as also in *Spain* and *Italy*. The Spaniards make use of the Footstalks of the Umbel for Toothpicks, from whence it obtained this Name. This Plant is preserved in the Gardens of some curious Persons, for the sake of Variety. It is an annual Plant, and perishes soon after the Seeds are ripe. The Seeds of this Plant should be sown early in the Autumn, that the Plants may obtain Strength before the Frost. These will endure the Cold of our Winters extremely well, provided the Seeds are sown on a dry Soil; for these Plants do not bear transplanting very well: therefore the Seeds should be sown where the Plants are designed to remain. In the Spring the Plants should be thinned where they come up too thick, leaving them about six or eight Inches asunder; and if they are afterward kept clear from Weeds, it is all the Culture these Plants require. In *June* they will flower, and their Seeds will ripen in *August*.

The second Sort is less common in *England* than the first: this is found on *Mount Libanus*, and in several other mountainous Places in the East Country. The Umbels of this Sort are much larger than of the former, and the Leaves of the Plant are not so finely cut. The Seeds of this Sort have been often brought into *England*, from which I have raised the Plants, which have grown very well the former Part of the Season; but they have always decayed soon after *Midsummer*, so that I never could preserve any of them to flower.

VITIS, The Vine.

In the former Volume of the *Gardeners Dictionary*, I have enumerated several Sorts of Grapes, which were the most esteem'd in *England*, either for the Table or Vineyard; but as there are some curious Sorts which have been lately introduced into *England*, so I shall mention them in this Place; and then add somewhat relating to their Culture, which was either omitted in the former Volume, or not fully explained.

1. The White Muscat or Frontinac of Alexandria, by some called the Jerusalem Muscat, and Gross Muscat. The Berries are of an oval Shape, and very large; they grow very loose on the Bunches, are very fleshy and firm, and when ripe are of a greenish White, and have a delicate Flavour, somewhat like the white Frontinac, but not quite so strong. This is a very late Grape, so rarely ripens in *England* without some Assistance; but as it is an excellent Fruit when ripe, so it merits a Place against hot Walls; where, with a little artificial Heat, it will ripen very well.

2. The Red Muscat or Frontinac of Alexandria, by some called Red Jerusalem Muscat. This is not quite so late in ripening as the former; so is more esteemed about *Paris*, where, against good Walls, it ripens very well without any artificial Heat. The Berries of this Kind are not quite so large as those of the White;

White; but they are of the same Form, and are equal in Goodness.

3. *The White Melie Grape.* The Berries of this Sort are of a middle Size, somewhat oval-shap'd, and grow pretty close on the Bunches. When these are ripe, they are of a greenish White, covered with a Flue which wipes off: the Juice is very sweet, and makes an excellent white Wine. This ripens very well against Walls, and in a good Season will ripen on Espaliers or in Vineyards.

4. *The White Morillon.* This is a middle-siz'd Grape, almost round, and grows pretty close on the Bunches; the Juice is well flavour'd, but the Skin is tough. This ripens very well against good Walls.

5. *The Alicant Grape.* This is a large Fruit of a deep-red Colour, covered with a blue Flue; the Bunches are also very large, and the Grapes grow sparsely on them. The Juice is rich and vinous, when the Grapes are thoroughly ripe; which seldom happens in this Country; unless they are brought forward with an artificial Heat. This is the Sort of Grape of which the strong *Spanish* Wine is made.

6. *The White Auvernat.* This is in Shape very like the black *Auvernat* Grape: it grows pretty close on the Bunches, and is of a muddy white Colour when ripe. The Juice of this Sort is not so palatable to eat as many others, but it makes an excellent white Wine.

7. *The Grey Auvernat* is also shap'd somewhat like the former; but is of a pale murrey Colour, inclining to brown. This Sort produces its Grapes looser on the Bunches than the former, and ripens sooner; so is better to plant for Vineyards, because it seldom fails to ripen in a good Aspect.

8. *The Raisin Muscat.* This is a large oblong pointed Grape, whose Berries are firm and fleshy, and are loosely placed on the Bunches. It is a very late Fruit, so will not ripen in *England* without the Assistance of a Hot-wall. This Sort of Grape is frequently brought over from *Portugal*, and is sold in Winter in the *London* Markets.

There have been several other Sorts of Grapes introduced into this Country of late; but there are not many of them worth cultivating, being too late in ripening to come to any Perfection in *England*, without the Assistance of artificial Heats; and there are amongst the Sorts here enumerated, some of the most valuable Kinds which deserve Hot-walls; for which Reason I shall not describe any more Sorts, since it would be an endless Task to enumerate all the Sorts of Grapes, which are known in *Europe*; for as new Varieties arise frequently from the Seeds in hot Countries, so the Inhabitants of those Wine Countries, who are curious in collecting the several Sorts, are annually adding to their Collections. The late Duke of *Tuscany*, who was formerly very curious in collecting all the Sorts of *Italian* and *Greek* Grapes into his Vineyards, was possessed of upward of Three hundred several Varieties; many of which were of little Worth, only were kept by way of Curiosity.

There have lately been some Plants of the *Tokay* Grapes brought into *England*. When these Cuttings were procured abroad, it was supposed, that the *Tokay* Wine was made of only one Sort of Grape: but by those of the Cuttings which did succeed here, it appears that there are several Sorts of Grapes cultivated in the Vineyards where that Wine is made, some of which are white, and others are black; but they are not extraordinary good Grapes for this Country.

Amongst the Claret Grapes there are also several Varieties, which differ in the Colour of their Juice; some of them having a very pale red Juice, which will not give much Colour to the Wine; and others have a deep-coloured Juice, which will stain like the Juice of Mulberries; and it is the latter Sort which the Vine-dressers abroad prefer. The Leaves of this Sort of Grape turn of a deep purple Colour all over, at the time when the Fruit is ripening; whereas the Leaves of the paler Sorts are like the Juice of the Fruit, of a more lively purple Colour; so that the Sorts of these Claret Grapes are as easily distinguished by their Leaves in the Autumn Season, as by the Fruit when ripe.

As to the Culture of Vines against Walls and Pales, that being fully treated of in the former Volume of the *Gardeners Dictionary*, I shall not enlarge on that in this Place; but shall add some Directions for the planting and managing Vines against Hot-walls, as also on Espaliers, because both these Methods are at present practised in *England*.

The Method of building Hot-walls will be treated under the Article *Wall*; so I shall pass it over in this Place, and proceed to the preparing of the Ground for planting. The Borders against these Hot-walls should have the Earth taken out three Feet deep, (provided the Ground is dry) otherwise two Feet will be sufficient; because in wet Land the Borders should be raised at least a Foot above the Level of the Ground, that the Roots of the Vines may not be injured by the Wet. When the Earth is taken out, the Bottom of the Trench should be filled with Stones, Lime, Rubbish, &c. a Foot and half thick, which should be levelled and beaten down pretty hard. The Trenches should be made five Feet wide at least, otherwise the Roots of the Vines will in a few Years extend themselves beyond the Rubbish; and finding an easy Passage downwards, will run into the moist Ground, and thereby imbibe so much Wet, as to lessen the vinous Flavour of the Grapes. But before the Rubbish is filled into the Trench, it is a better Method to raise a nine Inch Wall, at five Feet Distance from the Hot-wall, which will keep the Rubbish from intermixing with the neighbouring Earth, and also confine the Roots of the Vines to the Border in which they are planted, so that they cannot reach to the Moisture of the Ground about them. This nine Inch Wall should be raised to the Height of the intended Border; so will be of great Use to lay the Timbers of the Frames upon, which

which are designed to cover the Vines when they are forced, whereby the Timbers will be better preserved from rotting; and where the Borders are raised to any considerable Height above the Level of the Ground, these Walls will preserve the Borders from falling down into the Walks. But in carrying up of these Walls, it will be proper to leave, about eight or ten Feet Distance, little Openings to let the Water pass off; because when the Rubbish at the Bottom of the Trench unites and binds very hard, the Water cannot easily find a Passage thro' it. Therefore it will be the better Method to leave these small Passages in the Wall, lest the Moisture, being confined at Bottom, should be pent up as in a Ditch, which will be of ill Consequence to the Vines.

When the Walls are finished, and thoroughly dry, the Rubbish should be filled in as before directed; then there should be fresh light Earth laid on, about a Foot and a half thick, which will be a sufficient Depth of Soil for the Vines to root in. These Borders should be thus prepared at least a Month or six Weeks before the Vines are planted, that they may have Time to settle. The best Time to plant them is about the End of *March*, or the Beginning of *April*, according as the Season proves early or late. These I would also advise to be planted with Cuttings, rather than rooted Plants, for the Reasons assigned in the former Volume of the *Dictionary*; but there should be two Cuttings put into each Hole, lest one of them should fail; for if both should succeed, the weakest of them may be easily drawn out the following Spring. These Cuttings should be well chosen from good bearing Vines, and the Shoots should be well ripened, otherwise they will never make good Plants. The Distance these Vines should be allowed, is the same as for common Walls, *i. e.* about six Feet. In planting of them there should be Holes opened with a Spade, about fourteen or fifteen Inches deep; for if there are but three or four Inches of good Earth under the Foot of the Cuttings, it will be sufficient. Then the two Cuttings should be laid in the Hole a little sloping, but in such a manner as not to touch or cross each other; because if they do, when one of them is taken away the following Spring, it cannot be done without disturbing the other. Then the Earth should be filled into the Holes, and gently pressed with the Foot to the Cuttings, and raised in a Heap over them, so as just to cover the uppermost Eyes of the Cuttings. Then lay a little Mulch on the Surface of the Ground about the Cuttings, to prevent the Sun and Air from drying of the Earth; and if the Spring should prove very dry, they should have some Water once a Week, which will be as often as these Cuttings require it; for nothing will destroy them sooner than too much Water, which rots their Bark, and destroys them. If these Cuttings are well chosen, and the Instructions here laid down duly observed, they will make strong Shoots the first Summer; for I have frequently planted Cuttings, which have shot five Feet in one Year;

but then I carefully rubb'd off all the side-dangling Shoots as they were produced, and never permitted more than one Shoot to remain on each Cutting; which is what should always be observed by those who have the Management of Vines. With this Management there will be little Hazard of the Cuttings taking Root; for in upwards of Five hundred Cuttings which I received from *Italy*, which were cut off from the Vines in the Beginning of *November*, and wrapp'd up in Moss, and put on board the Ship, which did not arrive at the Port of *London* till *March*, so that they were full four Months cut off before they were planted; yet there were not twenty of the Number which failed, and many of them shot above six Feet the first Season.

As I have directed the pruning of Vines to be performed in the Autumn, in the former Volume of the *Dictionary* (which is without Dispute the best Season for this Work); so in preserving of the Cuttings till the planting Season, I have advised them to be cut to their Lengths, and their Ends laid into the Ground, and then covered with Litter to keep the Air from them: but since I have found it a much better Method not to shorten the Shoots, from which the Cuttings are to be made, but to lay their Ends just into the Ground, about two Inches deep, and so leave them at full Length, only observing to cover them with dry Litter or Peas-haulm in frosty dry Weather; but in moist Weather the Covering should not remain on, because it would make the Cuttings grow mouldy, which would greatly injure them. Then in the Spring, when they are to be planted, they should be taken out of the Ground, and their upper Part cut off, so as to reduce them to about fourteen Inches in Length, according to the Distance of the Buds or Eyes; for those Cuttings, whose Buds grow pretty close together, need not be left more than one Foot long; but in others fourteen Inches will be full short. The leaving the upper Part of the Shoots on all the Winter, is of great Service to the Cuttings, because when they are cut off in Autumn, the Air penetrates the wounded Part, and greatly injures the lower Eyes.

The Management of these Vines, for the three first Years after planting, being the same as is practised for those against common Walls, I shall not repeat it in this Place, having fully treated of that in the former Volume; only will observe, that during these three Years, the Vines should be encouraged as much as possible, and the Shoots not left too long, nor too many in Number on each Root, that they may be duly ripened and prepared for bearing the fourth Year, which is the soonest they should be forced; for when any Sorts of Fruit-tree are forced by Fire too young, they seldom continue above three or four Years, and during that Time they produce very weak Shoots, and what Fruit they produce, is small and not well-flavoured; so that in being overhasty to save a Year or two, very often the whole Design is lost; for unless the Trees are in

in a proper Condition to bear much Fruit, it is not worth while to make Fires for a small Quantity of starved ill-tasted Fruit; the Expence and Trouble being the same for ten or twelve Bunches of Grapes, as it will be for a hundred or more.

These Vines should not be forced every Year; but with good Management they may be forced every other Year; tho' it would be yet better, if it were done only every third Year; therefore in order to have a Supply of Fruit annually, there should be a sufficient Quantity of Walling built, to contain as many Vines as will be necessary for two or three Years, so that by making the Frames in Front moveable, they may be shifted from one Part of the Wall to another, as the Vines are alternately forced. Therefore I would advise about forty Feet in Length of Walling, to be each Year forced, which is as much as one Fire will heat; and when the Vines are in full Bearing, will supply a reasonable Quantity of Grapes for a middling Family.

In most Places where these Hot-walls have been built, they are commonly planted with early Kinds of Grapes, in order to have them early in the Season: but this, I think, is hardly worth the Trouble; for it is of but little Consequence to have a few Grapes earlier by a Month or six Weeks, than those against common Walls; therefore I should advise, whenever a Person is willing to be at the Expence of these Walls, that they may be planted with some of the best kinds of Grapes, which rarely come to any Perfection in this Country, without the Assistance of some artificial Heat; of which the following Sorts are the most valuable.

The Red Muscat of Alexandria.

The White Muscat of Alexandria.

The Raisin Muscat, or Frontiniac.

The Red Frontiniac.

The Grissy Frontiniac.

The White Frontiniac.

The Black Frontiniac.

The Burdelais or Burlace.

The Malmsey Muscadine.

The St. Peter.

When the Vines which are planted against the Hot-walls, are grown to full Bearing, they must be pruned and managed after the same manner as hath been directed in the former Volume of the *Dictionary* for those against common Walls; with this Difference only, *viz.* that those Seasons when they are not forced, the Vines should be carefully managed in the Summer for a Supply of good Wood, against the Time of their being forced; so that it will be the better Method to divest the Vines of their Fruit, in order to encourage the Wood; for as few of the Sorts will ripen without Heat, so it is not worth while to leave them on the Vines, during the Seasons of resting, except it be the common Frontiniac's, which in a good Season will ripen without artificial Heat; but even during these, I would not advise many Grapes to be left on them; because as the Design of resting the Vines, is to encourage and strengthen them; therefore all possible Care should be had, that the young Wood is not rob-

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bed by over-bearing; for those Years when the Vines are forced, the Joints of the young Wood are generally drawn farther asunder, than they ordinarily grow in the open Air; so that when they are forced two or three Years successively, the Vines are so much exhausted, as not to be recovered into a good bearing State, for some Years; especially if they are forced early in the Season, or where great Care is not taken in the Summer, to let them have a proper Share of free Air, to prevent their being drawn too much, and to ripen their Shoots. Those Years when the Vines are forced, the only Care should be to encourage the Fruit, without having much Regard to the Wood; so that every Shoot should be pruned for Fruit, and none of them shortened for a Supply of young Wood, because they may be so managed in the other Year's Pruning, as to replenish the Vines with new Wood. Those Vines which are designed for Forcing in the Spring, should be pruned early the Autumn before, that the Buds which are left on the Shoots, may receive all possible Nourishment from the Vine and at the same time, the Shoots should be fastened to the Trelase in the Order they are to lie; but the Glasses should not be placed before the Vines, till about the End of *January*, at which time also the Fires must be lighted; for if they are forced too early in the Year, they will begin to shoot before the Weather will be warm enough to admit Air to the Vines; which will cause the young Shoots to draw out weak, and thereby their Joints will be too far asunder; so consequently there will be fewer Grapes on them, and those Bunches which are produced, will be smaller, than when they have a sufficient Quantity of Air admitted to them every Day.

If the Fires are made at the Time before directed, the Vines will begin to shoot the latter End of *February*, which will be six Weeks earlier than they usually come out against the common Walls; so that by the Time that other Vines are shooting, these will be in Flower, which will be early enough to ripen any of those Sorts of Grapes perfectly well. The Fires should not be made very strong in these Walls; for if the Air is heated to about twenty Degrees above the temperate Point, on Mr. *Fowler's* Thermometers, it will be sufficiently warm enough to force out the Shoots leisurely, which is much better than to force them violently. These Fires should not be continued in the Day-time, unless the Weather should prove very cold, and the Sun not appearing to warm the Air, at which times it will be proper to have small Fires continued all the Day; for where the Walls are rightly contrived, a moderate Fire made every Evening, and continued till ten or eleven of the Clock at Night, will heat the Wall, and warm the inclosed Air to a proper Temperature; and as these Fires need not be continued longer than till about a Week or ten Days in *April*, (unless the Spring should prove very cold) so the Expence of the Fire will not be very great, because they may be contrived to burn either

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Coal,

Coal, Wood, Turf, or almost any other Sort of Fuel; tho' where Coal is to be had reasonable, it is the evenest Fuel for these Fires, and will not require much Attendance.

When the Vines begin to shoot, they must be frequently looked over to fasten the new Shoots to the Trelase, and to rub off all dangling Shoots; in doing of which great Care must be taken; for they are very tender, and very subject to break when any Violence is offered. The Shoots should also be trained very regular, so as to lie as near as possible at equal Distances, that they may equally enjoy the Benefit of the Air and Sun; which is absolutely necessary for the Improvement of the Fruit. When the Grapes are formed, the Shoots should be stopped at the second Joint beyond the Fruit, that the Nourishment may not be drawn away from the Fruit in useless Shoots, which must be avoided as much as possible in these forced Vines; upon which no useless Wood should be left, which will shade the Fruit, and exclude the Air from it by their Leaves.

As the Season advances, and the Weather becomes warm, so there should be a proportionable Share of free Air admitted to the Vines every Day, which is absolutely necessary to promote the Growth of the Fruit; but the Glasses should be shut close every Night, unless in very hot Weather; otherwise the cold Dews in the Night will retard the Growth of the Fruit. The Bunches of the *White Frontinac*, the *Raisin Muscat*, *St. Peter*, and *Burdels*, should also be looked over, and the small Grapes cut out with Scissars, in order to thin them; for these Sorts grow so close together on the Bunches, that the Moisture is detained between the Grapes, which often occasions their rotting; and the Air being excluded from the Middle of the Bunches, the Grapes never ripen equally; which by this Method may be remedied, if done in time: and as these Grapes are protected by the Glasses, from the Blights which frequently take those which are exposed, so there will be no Hazard in thinning these Grapes soon after they are set; at which time it will be much easier to perform this Operation, than when the Grapes are grown larger, and consequently will be closer together. But in doing of this, the Bunches must not be much handled; for if any of the Grapes are the least bruised, or the Flue which there naturally is upon them, be rubbed off, their Skins will harden and turn of a brown Colour; so the Fruit will never thrive after. Therefore the Scissars which are used for this Operation, should have very narrow Points, that they may be more easily put between the Grapes, without injuring the remaining ones. The other Sorts of Grapes which I have recommended for these Hot-walls, do not produce their Fruit so close together on the Bunches; so they will not require this Operation, unless by any Accident they should receive a Blight, which often occasions a great Inequality in the Size of the Grapes; which, whenever it thus happens, will require to be remedied by cutting off the small Grapes,

that the Bunches may ripen equally, and appear more sightly.

By the Beginning of *July*, these Grapes will be almost full-grown; therefore the Glasses may be kept off continually, unless the Season should prove very cold and wet; in which Case they must be kept on every Night, when the Days are cold or wet, and only opened when the Weather is favourable; for as the racy vinous Flavour of these Fruits is increased by a free Air, so during the Time of their ripening, they should have as large a Share as the Season will admit to be given them. But when the cold Nights begin to come on in *August*, the Glasses must be every Night shut to exclude the Cold, otherwise it will greatly retard the ripening of the Fruit; for although the Vines are brought so forward in the Spring, as that the Fruit by this Season are quite turned to their Colour, yet if they are exposed to the cold Dews, and the morning Frosts, which frequently happen toward the latter Part of *August*, it will prevent the Fruit from ripening so kindly as when they are guarded from it. When the Grapes begin to ripen, they must be carefully guarded against *Birds* and *Wasps*, otherwise they will be in Danger of Destruction in a short time; to prevent which, the Vines should be carefully covered with Nets, so as to exclude the Birds, who will make great Havock with the Grapes, by breaking of their Skins; and if there are a few Twigs covered with Birdlime, placed here and there on the Outside of the Nets, it will be of Service; because the Birds are often so bold as to attempt to break the Nets to get to the Grapes, and so may be entangled on these Twigs; from which, whenever that happens, they should not be disengaged, but suffered to remain to keep off their Companions; and if they do get off themselves, it will have the desired Effect; for there will few other Birds come to the same Place that Season, as I have more than once experienced.

As to the *Wasps*, the best Method is to hang up some Phials, about half filled with sugar'd Water, and rub the Necks of the Phials with a little Honey, which will draw all the Wasps to them, who by attempting to get at the Liquor, will fall into the Phials, and are drowned; so these should be carefully looked over once in three or four Days, to take out the Wasps and destroy them, and to replenish the Phials with Liquor. If this be duly observed, and the Phials placed in time, before the Grapes are attacked, it will effectually prevent their being injured; but where these Precautions are not taken, the Grapes will be in Danger of being absolutely destroyed: for as these early Grapes will turn Colour long before any others against common Walls, so they are in much more Danger, there being no other Fruit for them in the Neighbourhood: whereas, when Grapes in general begin to ripen, there is a large Quantity in almost every Garden; so that if they destroy a Part in each Garden, yet there will be a greater Chance to have some

some escape, than where there is only one Wall for them to attack.

These Sorts of Grapes, being forced in the manner before directed, will begin to ripen early in *September*, especially the *Black* and *Red Frontinias*, which will be fit for the Table a Fortnight earlier than the other Sorts; but as the Design of forcing them, is to have them in as great Perfection as possible in this Climate, so they should not be gathered until they are thorough ripe; for which Reason some of the later Sorts should be left on the Vines till *October*, or sometimes later; but then the Glasses should be kept over them in wet and cold Weather, to protect the Fruit from it; but whenever the Weather is fair, the Glasses must be opened to let in the free Air; otherwise the Damps, arising from the Earth at that Season, will cause a Mouldiness upon the Grapes, which will rot them. So that if the Season should prove very cold and wet, it will be proper to make a small Fire every Night, to dry off the Damps, and prevent this Injury. By this Method the Grapes may be continued upon the Vines, until the Middle or latter End of *November*, when some of the large late-ripe Sorts will be in very great Perfection. But most People in *England* gather their Grapes too soon, never suffering them to remain on the Vines to ripen, even in the warmest Seasons; when, if they are left on till after *Michaelmas*, they will be perfectly good.

Of late Years many Persons have planted Grapes against Espaliers, which in some Places have succeeded very well in good Seasons; but if these are not planted in a good Soil, and to a proper Aspect, and the Sorts rightly chosen, they seldom produce any Fruit which are fit to be eaten. The Soil proper to plant Vines in Espaliers, should be the same as hath been directed for Vineyards; viz. either a chalky or gravelly Bottom, with about a Foot and half of light hazel Earth on the Top, a little sloping to the South or South-East, that the Wet may easily find a Passage, so as not to remain on the Ground. In such a Soil situated to the Sun, and screened from cold Winds, there are several Sorts of Grapes, which in warm Seasons will ripen very well in *England*.

But there are some curious Persons who line the Backside of their Espaliers with low reed Hedges, and others who do it with thin slit Deals; both of which are a good Defence to the Vines against Blights in the Spring, and accelerate the ripening of the Grapes; so that in tolerable Seasons they will come to good Maturity. Neither of these Methods are very expensive; for these close Fences need not be more than four Feet high; because the Vines, being to be managed after the same manner as those in Vineyards, will never rise above the Height of a Man; and the bearing Shoots must always be trained about two Feet above the Surface of the Ground, so that the Fruit-branches will be always below the Top of the close Fences; and as for the upright Shoots, which are designed for the next

Year's Bearing, it matters not how much they rise above the Fence: so these may have a loose Trelase, to which they may be fastened, to prevent their over-hanging of the Fruit.

In the making of these Kinds of close Espaliers for Grapes, it will be proper to lay one strong oaken Plank (such as are procured in breaking up of old Ships or Barges) next the Surface of the Ground, which will last many Years sound, and be very useful in supporting of the Fences. If these Planks are fifteen Inches broad, as they may always be readily procured; then, if the upper Part of the Fence be Reeds, there may be two Lengths cut out of them (provided the Reeds are of a due Length) without including their Tops. In the Front of these Hedges should be a slight Trelase, to fasten the Vines to, which may be made of Ash Poles. The upright Poles of these Trelases need not be nearer together than eighteen Inches; and if there are three cross Poles, at about a Foot asunder, they will be sufficient to fasten the bearing Shoots of the Vines at proper Distances, in the manner they are designed to be trained; which should be in such Position, that the Fruit may not be over-shadow'd by the Branches. And if the upright Poles are cut so long, as to be a Foot and half above the Reeds, they will be tall enough to support the upright Shoots for the next Year's Bearing; which being trained singly at proper Distances, will have the Advantage of the Sun and Air to ripen the Wood, much better than where four or five Shoots are fastened to the same Pole.

To this Trelase the Reeds may be fastened with Hoops on the Backside, after the manner usually practised in making of common reed Fences; and if on the Top of the Reeds there is fastened a thin Slip of Deal, to secure the Tops of the Reeds from being broken, it will preserve them a long time. In making of these Fences the Reeds should not be laid too thick; for that will not only be more Expence, but will be troublesome to fasten, and not last so long, as when they are made of a moderate Thickness. Therefore, as the Reeds will be cut into two Lengths, each Bundle will spread about six Feet in Length; observing first to spread the bottom Parts of the Bundles, which contain the largest Ends of the Reeds, the whole Length; and then the upper Parts of the Reeds should be reversed and spread in Front of the other, which will make the upper Part of the Fence almost as thick as the Bottom. But neither these, nor the boarded Fences, need be made till the Vines are in full Bearing, which will be the fourth or fifth Year after planting, according to the Progress they make; during which Time the Shoots may be supported by any common Stakes. For if the Fences are made before the Vines are planted, as is frequently practised, they will be half decayed by the Time the Vines are fit to bear; and before this Time, the Fences are of no Use to them.

The Sorts of Grapes which are proper to plant against these Fences, are,

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The Miller Grape.

The Black Morillon.

The Chasselas White.

The White Muscadine.

The Melie Grape.

The Sweet Water.

The Auvernat, or true Burgundy.

These, if well managed, will ripen very well, provided the Season is tolerably good, and will come in soon after those on the Walls; so that if they are taken care of, by hanging of Mats before them, when the Nights prove cold in Autumn, and are permitted to hang till October, the Fruit will prove very good. But where the *Sweet Water Grape* is planted against these Fences, they will require to be covered in the Spring, at the time when they are in Flower, if there should be cold Nights; otherwise the Bunches will receive a Blast, which will destroy the greatest Part of the Grapes, so that many times there will not be more than six or eight good Grapes on each Bunch; and the others will be small starved Fruit, hardly so large as the smallest Pease.

In planting of these Vines, either for open Espaliers, or the close Fences, they should be performed in the same manner as for Vineyards, which should be from Cuttings planted six Feet asunder, putting two into each Hole. And as these are only designed for the Table, so a single Row of a moderate Length will be sufficient to supply a Family, where there are others against Walls to come before them. But where a Person is inclinable to have more Rows than one, they should be placed twelve Feet asunder, that they may equally enjoy the Sun and Air.

As to the Pruning and other Management of these Vines, that being the same as for those in the Vineyard, I shall not repeat it in this Place, it being fully inserted in the former Volume of the *Dictionary*: and to which I have nothing here to add, more than that I find the Grape which is preferred by the most skilful *Vignerons* in *France*, and what they call the *Auvernat*, as before-mentioned, is the same which in *England* is called the *Blue Cluster Grape*, and hath been long in this Country planted as an eating Grape against Walls; so that from these, Cuttings may be easily procured. But it is to be feared, that the bad Seasons, and the ill Success which has attended the few Vineyards already planted in *England*, will put a Stop to their future Improvements, tho' it is great Pity it should; for as to the bad Seasons, the Vineyards abroad have been equally exposed thereto; nor has the Wine which they have produced the two last Seasons, been of much Value; so that the Dealers in Wine in *England* have mixed it up with some of the strong Wines of former Years Growth, in order to render it saleable. And with regard to the ill Success which People have had, who have planted Vineyards, that is entirely owing to their not having followed the Directions exhibited in the former Volume of the *Dictionary*, either in the Choice of Soil and Situation, the Sorts of Grapes, the

Distance which should be allowed to them, or the Method of pruning and managing them. In every of these Articles, I am convinced from several later Trials, there is no Reason to make the least Alteration. And as to what farther Observations I have made, in the Business of Pressing, making and keeping of Wines, that shall be inserted under the Article *Wine*.

ULMARIA, Meadow-sweet, or Queen of the Meadow.

The Characters are;

It hath a Flower composed of several Leaves, which are placed in a circular Order, and expand in form of a Rose; out of whose Empalement rises the Pointal, which afterward becomes a Fruit, composed of many little membranaceous crooked Husks, gathered into a Head, each of which generally contains one Seed.

The Species are;

1. **ULMARIA**. *Clus. Hist.* Meadow-sweet.
2. **ULMARIA** *flore pleno. Jussieu.* Meadow-sweet with a double Flower.
3. **ULMARIA** *foliis ex luteo variegatis.* Meadow-sweet with Leaves variegated with Yellow.

The first Sort grows wild in moist Meadows in most Parts of *England*, and flowers the Beginning of *June*, when it makes a fine Appearance amongst the Grass. It also grows plentifully on the Sides of Ditches and Rivers, where, as it is not often mowed down, it continues much longer in Beauty, and the Stalks rise to a greater Height. The Flowers which are produced on the Tops of the Stalks, in form of an Umbel, are white, and smell very sweet. These, as also the Leaves and Roots, are used in Medicine. This Plant is esteemed to be cooling, drying and binding; and also is sudorific and alexipharmic. The Preparations of this Plant are, the distilled Water of the Flowers and Leaves, and the Extract, which is by some much commended. The Flowers give an agreeable Flavour to Wine, and are sometimes used to add a Flavour to strong *Spanish* Wines, like that of the *Malvatic* Wine, which is made in the Island of *Candy*. These Flowers are proper to place in Basons to adorn Halls and Chambers; because they are of an agreeable Sweetness, which doth not offend the Head.

This Plant is seldom planted in Gardens, being so commonly found wild in the Fields; but in low moist Places in large Gardens, if some of these Plants were placed, they would afford an agreeable Variety; and in such Places few other Plants, which are more valuable, will thrive.

The second Sort deserves a Place in every good Garden, for the sake of its fine double Flowers, which continue in Beauty a long time. This doth not differ from the common Sort in any thing, excepting that the Flowers are very double and large; so that when it is planted on a moist Soil, or is duly watered in dry Weather, it makes a fine Appearance for at least a Month, or in a cool Season near six Weeks;

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Weeks; and as the Flowers have an agreeable Sweetness, so they are a fine Ornament in Basons to place in Rooms.

These Plants are propagated by parting of their Roots, which should be done in Autumn, that they may be well rooted before the dry Weather comes on in the Spring; otherwise they will not flower very strong the following Summer. These Roots need not be parted oftener than every other Year, and then they should not be parted into small Heads; for as the Beauty of this Plant is to have many Stems of Flowers, so when the Roots are divided too much, there will be very few Stems produced, and consequently the Plants will make but a mean Appearance.

Where these Plants are placed in moist shady Borders, intermixed with other flowering Plants, they should be allowed good Room; for as their Roots spread pretty far in the Ground, so when they have but little Room, they will starve in Summer, unless they are plentifully watered, and the Soil be very good in which they are planted; for where-ever their Roots intermix with those of other Plants, there will be a great Struggle for the Mastery, and thereby both Sorts will be rendered weak. So that these should be planted two Feet asunder, and as much from any other Plants; and this will be Room enough to dig the Ground between the Plants, which should always be carefully done those Years when the Plants are not removed; which will encourage the Roots, and cause them to flower very strong.

The Sort with strip'd Leaves is also preserved in some Gardens for the sake of Variety. This may be propagated by parting of the Roots in the same manner as the former Sort; but this must not have a rich Soil, for that will cause it to run plain.

ULMUS, The Elm-tree.

To this Article must be added;

1. *ULMUS minor, folio angusto glabro.* The smooth narrow-leav'd Elm, by some called the Upright narrow-leav'd Elm.

2. *ULMUS folio lato scabro, cortice cinereo glabro.* The white bark'd Elm, by some called the smooth Witch Elm, and by others the Irish Elm.

3. *ULMUS folio lato scabro, angustis samaribus.* The French Elm.

There are some other Varieties of the Elm, which differ so little from the Sorts enumerated in this and the former Volume of the Dictionary, as scarcely to be distinguished; so it will be needless to mention them, because they are not so proper to make Plantations, as the other more common Sorts.

The first of these Sorts is very common in some Parts of Hertfordshire, and in Cambridge-shire, where there is scarce any other Sort of Elm to be seen. This makes a very handsome upright Tree, and retains its Leaves as late in the Autumn, as the common small-leav'd Elm, which is called the English Elm by the Nursery Men near London.

The second Sort is by some Persons preferred to most others, for the free Growth, and

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its retaining the Leaves longer than any other Sort. The Bark of this Tree is very smooth, and of an Ash-colour; the Leaves are of a lively green Colour, and the Growth of the Tree is very regular and upright.

The third Sort is not so much esteemed as either of the former; but it being a very hardy Kind, will grow in such Soils, where the former will not, for which some Persons cultivate it; tho' I think neither this nor the Dutch Elm worth planting, because when they are arrived to a considerable Size, they make a most detestable Appearance: their Branches growing very straggling, which have a thick rugged Bark, and their Leaves being very thinly placed on them, they look very disagreeable; and the Leaves of both these Sorts fall sooner in Autumn, than those of the common Elm.

These may be propagated in the same manner as the common Sorts, for which there are full Instructions exhibited in the former Volume of the Gardeners Dictionary; so I shall not repeat them here.

URTICA, Nettle.

To this Article should be added;

1. *URTICA maxima racemosa Canadensis.* H. R. Par. The greatest branching Nettle of Canady.

2. *URTICA Canadensis, myrrhoidis folio.* Inst. R. H. Canady Nettle, with a Leaf of Sweet Cicely.

3. *URTICA racemosa Americana, amplo coryli folio.* Plum. Cat. Branching American Nettle, with a large Hazel-leaf.

4. *URTICA racemifera maxima Sincarum, foliis subtus argenteis lanugine villosis.* Pluk. Amalth. Greatest branching Nettle of China, with Leaves which are white and woolly underneath.

The first of these Plants is very common in many English Gardens, where it is preserved more for the sake of Variety, than for any Beauty it hath. This hath an abiding Root, which sends forth a great Number of Shoots every Spring, which rise about three Feet high, and form a thick Tuft or Bush, which continues green till the Autumn, when the Shoots decay to the Root. This may be propagated by parting of the Root in the Spring, and may be planted in almost any Soil or Situation, and will endure the severest Cold of this Climate in the open Air.

The second Sort is also preserved in some curious Gardens, for the sake of Variety. The Leaves of this Plant are finely cut and jagged into many Parts, in some manner resembling those of Sweet Cicely. This is also a very hardy Plant, and may be treated as the former.

The third Sort was discovered by Father Plumier in America. This is more impatient of Cold than the other; so should be planted in Pots, and placed in Shelter in the Winter Season, otherwise it will not live in this Country. But as it is a Plant of little Beauty, so it is only preserved by some curious Persons for Variety.

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The fourth Sort retains its Leaves all the Winter, which are very large and hoary underneath, so make an agreeable Variety in the Green-house in the Winter Season. The Stems of this Plant rise four Feet high or more; and these often branch out, at the Top, into Side-shoots; and the Flowers (which are like those of the common Nettle) are produced from the Wings of the Leaves. This Sort is too tender to live in the open Air in Winter; so the Plants should be potted, and in Autumn removed into the Green-house; where, if they are secured from the Frost, and frequently refreshed with Water, they will thrive extremely well. In Summer they may be placed abroad in a sheltered Situation, and in dry Weather they must be plentifully watered; for they are very thirsty Plants. This may also be propagated by parting of the Roots, which should be done in May, when they are removed out of the Green-house; for at that Season this Plant is in its least Vigour, the Winter being the Time when it is most flourishing. The Seeds of this Plant were brought from China, where the Plant is called *Peama*.

UVA URSI, The Spanish Red-whort.

The Characters are;

It hath a globular bell-shaped Flower, consisting of one Leaf, from whose Empalement arises the Pointal, fixed like a Nail in the binder Part of the Flower; which afterward becomes a soft Berry or Fruit of a spherical Form, inclosing hard Seeds, which are some plain, and others gibbous.

There is but one Species of this Plant at present known; viz.

UVA URSI. Clus. Hist. Spanish Red-whort.

This Plant is very near a-kin to our common Whorts or Bilberries: it rises about a Foot high, and hath several flexible Branches, which are covered with a reddish Bark, somewhat like the young Branches of the Strawberry-tree: these are thinly beset with oblong stiff green Leaves, which are serrated on their Edges. The Flowers grow on the Top of the Branches, which are of a whitish blush Colour; these are succeeded by red Berries, somewhat larger than those of our common Whorts, which have an acid Taste.

This Plant must be treated in the same manner as our *Vitis Idæa*, or Bilberry; which is to procure the Plants with Balls of Earth to their Roots, from the Place of its native Growth; because the Seeds often fail, and when they do succeed, it will be a long time before the Plants will grow to any Size; but as there are Directions for the Management of these Plants exhibited in the former Volume of the Dictionary, under the Article of *Vitis Idæa*, I shall not repeat them in this Places.

VULNERARIA, Woundwort.

The Characters are;

It hath a papilionaceous (or Pea-bloom) Flower, out of whose tubular and turgid Empalement arises the Pointal, which afterward becomes a short Pod filled with roundish Seeds.

To these Notes must be added, That the Pod is inclosed in a membranous Bladder, which was before the Empalement.

The Species are;

1. VULNERARIA *rustica*. J. B. Rustic Woundwort, Kidney Vetch, or Ladies Finger.
2. VULNERARIA *rustica*, flore albo. Inst. R. H. Rustic Woundwort, with a white Flower.
3. VULNERARIA *flore purpurascens*. Inst. R. H. Rustic Woundwort, with a purplish Flower.
4. VULNERARIA *pentaphyllos*. Inst. R. H. Five-leav'd Woundwort.
5. VULNERARIA *Cretica*, flore parvo vario. Tourn. Cor. Candy Woundwort, with a small variable Flower.

The first Sort grows wild on poor chalky Ground in divers Parts of England, so is rarely cultivated in Gardens. This sends forth several Stalks from the Root, which are about eight or nine Inches long, beset with hairy Leaves alternately, which are composed of four or five Pair of Lobes, terminated with an odd one. On the Top of the Stalks the Flowers are produced, which are small, and of a yellow Colour, collected together in a broad Head, which are succeeded by short Pods filled with roundish Seeds. This Plant flowers toward the End of May, and the Seeds are ripe in July.

The second Sort is a Variety of the first, from which it only differs in the Colour of its Flowers, which are white.

The third Sort is found wild in some Parts of Wales, from whence the Seeds and Plants have been procured by some curious Botanists, who preserve them in their Gardens. This Sort produces pretty purplish Flowers, collected into Heads, which make an agreeable Appearance.

The fourth Sort is found wild in Italy, Sicily, and some other warm Countries; but in England it is preserved in some curious Gardens for the sake of Variety. This is an annual Plant, which perishes with the first Approach of Winter. The Seeds of this Plant should be sown about the Middle of March, on a Bed of light Earth, in an open Situation, where they are designed to remain, because the Plants do not bear transplanting very well. Therefore the best Method is, to sow the Seeds in small Drills, made two Feet asunder; and when the Plants are come up, they should be thinned where they are too close, so as to leave them six or eight Inches asunder in the Rows, and then keep the Ground clean from Weeds, which is all the Culture they require. The Branches of this Plant spread flat on the Ground, and the Flowers are produced in large Bladders from the Wings of the Leaves. These appear in June, and the Seeds will ripen the End of August.

If some of these Seeds are sown, the Beginning of September, on a warm dry Border, the Plants will come up in Autumn, and live thro' the Winter, (provided it is not very severe) and will flower early the following Summer, whereby good Seeds may be obtained; for when the Summers prove cold and wet, those

Plants

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Plants which come up from Seeds sown in the Spring, do not produce ripe Seeds; so that the *Species* may be lost, where there are not autumnal Plants.

The fifth Sort was discovered by Dr. *Tournefort* in the Island of *Candy*, from whence he sent the Seeds to the Royal Garden at *Paris*. This is also an annual Plant, so should be managed in the same manner as hath been directed for the former Sort.

The first, second and third Sorts, will abide two, and sometimes three Years, before their Roots decay; tho' they generally are in the greatest Vigour the second Year, for these rarely flower the same Year they are sown. The surest Method to have these Plants succeed in a Garden, is to sow their Seeds in the Autumn as soon as they are ripe, on a Bed or Border of poor, dry, gravelly or chalky Soil, on which they will thrive much better than on a rich garden Earth. When the Plants are come up, they should be thinned, leaving them six or eight Inches asunder; and afterward, if they are kept clear from Weeds, they will require no farther Care.

The first Sort was formerly much used by the *Germans*, as a Wound-herb, from whence it obtained its Name; but at present it is not in any Use.

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WALKS.

In the former Volume of the *Dictionary*, I have given Directions for the making and keeping of Gravel and Grass-Walks; to which I shall here add something relating to Sand-Walks, which are now very frequently made in Gardens, as being less expensive in the making, and also in keeping, than either of the former; and in very large irregular Gardens, which are such as most Persons now esteem, this is a very great Article: for as the greatest Part of the Walks which are made in Gardens, twist about in an irregular Manner, it would be very difficult to keep them handsome, if they were laid with Gravel. And as these Walks are for the most part shaded by Trees; so the dripping of the Water from their Branches in hard Rains, would wash the Gravel in Holes, and render the Walks very unsightly. When these Wood-Walks are Grass, they do not appear sightly, nor are they very proper for walking on; for after Rain they continue damp so long, that they become unhealthy to walk on; and the Grass generally grows spiry and weak for want of Air; and by the continual dropping of the Trees, will by Degrees be destroyed. Therefore it is much better to lay these Walks with Sand, which will be dry and wholesome; and whenever they appear mossy, or any Weeds begin to grow on them, if they are shov'd with a *Dutch* Hough in dry Weather, and then raked over, it will destroy the

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Weeds and Moss, and make the Walks appear as fresh and handsome as if they had been new-laid.

Grass-Walks of late Years have been very little esteemed, because they are so unfit for walking on; for in a Morning there is commonly a great Dew upon the Grass, as there is also late in the Evening, and after Rain they continue moist a long time; so that it is only in the Middle of the Day that these Walks can be used, which is a Time few Persons care to be in a Garden: and at most times there remains a Dampness, which frequently occasions Colds to such Persons as are tender; so they are with good Reason disused at present. Besides, these Walks are not very beautiful, there being little Pleasure in viewing long narrow Slips of Grass, which is what most Grass-Walks must be termed, being bounded either with Gravel or Borders on the Sides. And Grass never appears so beautiful, as when it is dispos'd into large irregular Pieces, and bounded with Trees.

Gravel-Walks are very necessary near the House, because they are soon dry after Rain, so are proper for walking on, in all Seasons. But then these should be but few, and those ought to be large and magnificent, proportionable to the Grandeur of the House and Garden. The principal of these Walks should be elevated parallel with the House, so as to form a Terrace; this should extend itself each way, in proportion to the Width of the Garden; so that from this there may be a Communication with the Sand-Walks, without going on the Grass; or there should be two side Walks of Gravel to lead to them, so that there may be a dry Walk continued quite thro' the Gardens. But there is not a more ridiculous Sight, than that of a strait Gravel-walk, leading to the Front of the House, intersecting the Grass, so as to cause it to appear like the stiff formal Grass-plots, frequently made in little Court Yards by Persons of low Taste.

In the modern Way of laying out Gardens, the Walks are carried thro' Woods and Plantations, so that these are shady and convenient for walking in the Middle of the Day. These are usually carried about, winding as much as the Ground will admit of, so as to leave a sufficient Thickness of Wood, to make the Walks private; and that the Persons who are walking in one Part of them, may not be seen by those who are in any of the other Parts. Where these Walks are contrived with Judgment, a small Extent of Ground will admit of a great many Turns; so that a Person may walk some Miles in a small Garden. But these Turns should be made as natural as possible, so as not to appear too much like a Work of Art, which will never please so long as the former.

The Breadth of these Walks must be proportioned to the Size of the Ground, which in a large Extent may be twelve or fourteen Feet wide, but in small Gardens five or six Feet will be sufficient. There are some Persons who allow a much greater Breadth to their Walks,

Walks, than what I have assigned to the largest Gardens; but as these Walks are supposed to be shaded by Trees, so when they are made too broad, the Trees must be planted close to the Sides of the Walks; and then it will be a long time before they will afford a sufficient Shade, if the Trees are young. Therefore I imagine, the Width here allowed will by most People be thought sufficient, especially as the Walks are designed to wind as much as the Ground will allow, because the wider they are, the greater must be the Turns; otherwise the Walks will not be private for any small Distance. Besides, as it will be proper to line the Sides of these Walks with Honeyfuckles, Sweet-brier, Roses, and many other sweet-flowering Shrubs; so the tall Trees should be placed four or five Feet from the Walk, to allow Room for these. But as I shall particularly treat of the Method of laying out Wilderesses, and planting of them, in such a manner as to render them as nearly resembling a natural Wood as possible, under its proper Head; I shall add nothing more in this Place, except a few common Directions for making of these Sand-Walks.

When the Ground is traced out in the manner as the Walks are designed, the Earth should be taken out of the Walks, and laid in the Quarters. The Depth of this must be proportion'd to the Nature of the Soil; for where the Ground is dry, the Walks need not be elevated much above the Quarters; so the Earth should be taken out four or five Inches deep in such Places: but where the Ground is wet, the Bottom of the Walks need not be more than two Inches below the Surface, that the Walks may be raised so high, as to throw off the Wet into the Quarters; which will render them more dry and healthy to walk on.

After the Earth is taken out to the intended Depth, the Bottom of the Walks should be laid with Rubbish, coarse Gravel, or whatever of the like Nature can be most readily procured. This should be laid three or four Inches thick, and beaten down as close as possible, to prevent the Worms from working thro' it; then the Sand should be laid on about three Inches thick; and after treading it down as close as possible, it should be raked over, to level and smooth the Surface. In doing of this, the Whole should be laid a little rounding to throw off the Wet: but there will be no Necessity of observing any Exactness therein; for as the whole Ground is to have as little Appearance of Art as possible, the rounding of these Walks should be as natural, and only so contrived, as that the Water may have free Passage off them.

The Sand with which these Walks are laid, should be such as will bind; otherwise it will be very troublesome to walk on them in dry Weather: for if the Sand be of a loose Nature, it will be moved with strong Gales of Wind, and in dry Weather will slide from under the Feet. If after these Walks are laid, they are well rolled two or three times, it will settle them, and cause them to be firm. If the Sand

is too much inclinable to Loam, it will also be attended with as ill Consequence, as that which is too loose: for this will stick to the Feet after every Rain; so that where Sand can be obtained of a middle Nature, it should always be preferred.

In some Countries where Sand cannot be easily procured, these Walks may be laid with Sea-shells well pounded, so as to reduce them to a Powder, which will bind extremely well, provided they are rolled now and then. But where neither of these can be easily procured, Sea-coal, Ashes, or whatever else can be gotten, which will bind and be dry to the Feet, may be used for this Purpose. And where any of these can only be had in small Quantities, the Walks should have a greater Share of Rubbish laid in their Bottom, and these spread thinly over them; and in most Places Rubbish, rough Stones, or coarse Gravel, may be easily procured.

WALLS.

In the building of Walls to accelerate the ripening of Fruits, there have been many Contrivances for obtaining the greatest Warmth from the Sun; such as inclining the Walls to the Horizon, that the Rays may fall more directly upon them. Others have built Walls in Semicircles, thinking thereby to collect the Force of the Sun's Rays, and thereby to reflect them from one Side of the half Circle to the other: and there are some who have built their Walls in Angles for the same Purpose. But neither of these Contrivances have succeeded according to the Expectations of the Persons who have practised them; for their Fruits have not ripened so well against either of these Walls, as against such as have been plain. For as to those Walls which are built inclining to the Horizon, tho' they have the Rays of the Sun almost perpendicular in the Middle of the Day; yet in the Mornings and Evenings, the Rays fall more oblique on these Walls, than on those which are upright. And it is not the greatest Force of the Sun's Rays, in the Middle of the Day, which is of so much Service to Fruits, as the long Continuance of the Sun on the Wall, or its strongest Force in the Morning to dry the Dew from off the Trees; for in the Middle of the Day, when the Sun is greatly advanced above the Horizon, and the Air thoroughly warmed by his Influence, there will need no additional Heat to forward the Growth of the Fruit, and to ripen it in Perfection: for where-ever the Fruit is exposed too much to the Sun by the want of Leaves to shade it, and these Fruit happen to lie close to the Wall, as is sometimes the Case; they are never so fair or well-tasted, as those which are screened from the Sun by Leaves: for the violent Heat of the Sun in the Middle of the Day, in very hot Weather, will cause many Fruits, which are too much exposed, to be mealy before they are ripe. And these inclining Walls are greatly exposed to hoary Frosts in Spring and Autumn, which are very destructive to

Fruits,

Fruits, as also to Rain, Hail, &c. and the Dampness will remain a considerable time longer on these sloping Walls, than on those which are upright; so that these sloping Walls are by no means proper for Fruit.

As to those Walls which are built in half Circles, or those in Angles, they are also bad; for the Wind, being drawn into the Area's of them, is reverberated from Side to Side, which renders the Air about the Fruit much colder than any in the Neighbourhood; so instead of forwarding the ripening of the Fruit, as they were intended, the Fruit will be much later ripe than against plain Walls built to the same Aspect, as I have several times observed; so that from all the several Trials which have yet been made of different shaped Walls, it appears there are none so proper for Fruit as those which are built plain; and as these are also the least Expence to build, so they should always be preferred.

According to the modern Taste in Gardening, there are very few Walls built round Gardens; which is certainly very right, not only with regard to the Pleasure of viewing the neighbouring Country from the Garden, but also in regard to the Expence, 1. of building these Walls; and, 2. if they are planted with Fruit, as is frequently practised, to maintain them will be a constant Charge, without receiving much Profit or Pleasure. For when there is too much Walling planted with Fruit Trees, they are seldom taken much Care of; so that the Quantity of Fruit produced will be small, and that ill-nourished and bad-tasted. Therefore the Quantity of Walling should be proportioned to the Fruit consumed in the Family. But as it will be necessary to inclose the Kitchen-garden, for the Security of the Plants, so, if that be walled round, it will contain as much Fruit as will be wanted in the Family; because the Kitchen-garden is always proportioned to the Number of Persons maintained. And as the Kitchen Garden should always be placed out of Sight from the House, so the Walls may be hid by Plantations of Trees, at some little Distance, which will be of Use in sheltering of the Fruit.

The best Aspect for Walls in *England*, is to have one Point to the Eastward of the South; for these will enjoy the Benefit of the Morning Sun, and will be less exposed to the West and South-west Winds, (which are very injurious to Fruit in *England*) than those Walls which are built due South. I know there are many Persons who object to the turning of Walls the least Point to the East, on Account of the Blights which they say come from the East in the Spring. But from many Years Experience and Observation, I can affirm, that Blights as often attack those Walls which are open to the South-west, as those which are built to any other Aspect: and I believe, whoever will be at the Trouble to observe for seven Years, which aspected Walls suffer most from Blights, will find those which are built with a Point to the Eastward of the South, as seldom blighted as those which are turned to any other Aspect.

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Therefore, in the Contrivance of a Kitchen-garden, there should be as great Length of these Walls built as the Situation of the Ground will admit.

The next best Aspect is due South, and the next to that South-east, which is preferable to the South-west, for the Reasons before assigned. But as there will for the most part be South-west and West Walls in every Garden; so these may be planted with some Sorts of Fruit, which do not require so much Heat to ripen them, as those designed for the best Walls. But where-ever there are North-walls, it is hardly worth while to plant them with Fruit; because whatever Sorts of Fruit will ripen against them, will do much better in Espaliers, or on Standards.

Where Persons are very curious to have good Fruit, they erect a Trelase against their Walls, which projects about four Inches from them, to which they fasten their Trees; which is an excellent Method, because the Fruit will be always at a proper Distance from the Walls, so as not to be injured by them, and will have all the Advantage of their Heat. And by this method the Walls will not be injured by driving Nails into their Joints, which by every Year being drawn out, do draw out the Mortar from between the Bricks, and thereby make Holes; in which Snails and other Vermin will harbour, and destroy the Fruit, and the Walls will be also greatly impaired.

These Trelases may be contrived according to the Sorts of Fruit which are planted against them. Those which are designed for Peaches, Nectarines, and Apricocks, (which for the most part produce their Fruit on the young Wood) should have their Rails three, or at most but four Inches asunder every way. But for other Sorts of Fruit, which continue bearing on the old Wood, they may be five or six Inches apart; and those for Vines may be eight or nine Inches Distance. For as the Shoots of Vines are always trained at a much greater Distance, than those of any other Sort of Fruit, so the Trelases for these need not be near so close; especially as those must for Peaches and Nectarines, whose Shoots are generally shortened to about five or six Inches or less; so that, if the Rails are not pretty close, many of the short Branches cannot be fastened to them.

These Trelases may be made of any Sort of Timber, according to the Expence which the Owner is willing to bestow; but Fir is most commonly used for this Purpose, which if well dried and painted, will last many Years; but if a Person will go to the Expence of Oak, it will last sound much longer. And if any one is unwilling to be at the Expence of either, then a Trelase may be made of Ash-poles, in the same manner as is practised in making Espaliers, with this Difference only, that every fourth upright Rail or Post should be very strong, and fastened with Iron Hooks to the Wall, which will support the Whole: and as these Rails must be laid much closer together, than is generally practised for Espaliers; so these strong upright Rails or Posts will

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will not be farther distant than three Feet from each other. To these the cross Rails which are laid horizontally should be well nailed, which will secure them from being displaced, and also strengthen the Trelase; but to the other smaller upright Poles, they need only be fastened with Wire. To these Trelases the Shoots of the Trees should be fastened with Ozier-twigs, Rope-yarn, or any other soft Bandage; for they must not be nailed to it, because that will decay the Woodwork.

These Trelases need not be erected until the Trees are well spread, and begin to bear Fruit plentifully; before which time the young Trees may be trained up against any ordinary low Espalier, made only of a few slender Ash-poles, or any other Sort of slender Sticks; by which Contrivance the Trelases will be new when the Trees come to Bearing, and will last many Years after the Trees have overspread them. Whereas when they are made before the Trees are planted, they will be half decayed before the Trees come to bearing Fruit.

Where these Trelases are intended to be made against new Walls, it will be proper to fasten some strong Iron Hooks into the Wall as it is built, at the Distance which the upright Posts are intended to be placed; because when these are afterwards driven into the Wall, they displace the Mortar in the Joints, and injure the Wall.

In the building of the Walls round a Kitchen-garden, the Insides which are designed to be planted with Fruit-trees, should be made as plain as possible, so that the Piers should not project on those Sides above four Inches at most; and these should be placed about fourteen Feet asunder, in such Walls as are designed for Peach and Nectarine-trees, so that each Tree may be planted exactly in the Middle between the Piers, which will render them more tightly, and be better for the Trees. But where Apricocks, Plums or Cherries, are to be planted, the Piers may be only ten Feet asunder, and against every other Pier the Trees should be planted, which will allow them sufficient Room to spread; and as the Trelase will project as forward as the Piers, so the Branches of the Trees may be trained on a Plain. But when the Piers do not project more on the Inside of the Garden, they should be built stronger on the Outside, for the better supporting of the Walls.

The usual Thickness which Garden-walls are allowed, if built with Bricks, is thirteen Inches, which is one Brick and a half: but this should be proportionable to the Height; for if they are all built fourteen Feet high or more, as is often practised, then the Foundations of the Walls should be at least two Bricks and a half thick, and brought up level to the Surface of the Ground, of the same Thickness; then they should be set off two Inches on each Side, which will reduce them to two Bricks; and four Feet above the Ground, they may be diminished on each Side, to reduce them to the Thickness of a Brick and half, which must be continued to the Top of the Walls. And the Piers in these high Walls should also be propor-

tionably stronger than is commonly allow'd to lower Walls; for as these will be much more exposed to strong Gales of Wind, so if they are not well built, they will be in Danger of being blown down. Therefore the Piers of these Walls should be projected the Length of a Brick on their Backside, and the Thickness of a Brick on their Front; and if these are built about ten or twelve Feet asunder, they will greatly strengthen the Walls.

But there is no Necessity of building Walls higher than nine or ten Feet, unless it be for Pears, which, if properly managed, will spread over a great Compass of Walling; but as only some of the latest Winter-pears require the Assistance of a Wall, so there need no more but that Part of the Wall where these are designed to be built higher; for Peaches and Nectarines never require a Wall higher than nine or ten Feet, provided they are rightly managed; for whenever they are carried to a greater Height, the lower Part of the Wall is unfurnished with bearing Branches. And altho' Apricocks, Plums and Cherries, will frequently grow higher; yet if they are planted at a proper Distance, and the Branches trained horizontally from the Bottom, they will not soon cover a Wall of this Height. And Vines may be kept as low as any Sort of Fruit; for when they are planted against low Walls, they must be treated somewhat after the same manner as those in Vineyards, which is to cut out the greatest Part of the Wood which produced Fruit the preceding Year, and train in new Shoots for the next Year's Bearing, which are rarely left a Yard in Length; so will not require very high Walls.

If the Pears which are designed to be planted, are allowed a South-west Aspect, on which they will ripen very well; then the Wall to this Aspect should be built fourteen Feet high or more; for as these Trees spread very far, when on free Stocks, so they should not be shortened and stopp'd in their Growth, which will prevent their Bearing, by causing them to send out a great Number of gross luxuriant Shoots, which will never produce Fruit. Therefore these should never be planted amongst other Sorts of Fruit-trees, which are of smaller Growth; because then the Walls must appear very unsightly, in having some Trees planted more than double the Distance which the others require; so that there is no other Sort of Fruit, which requires the Assistance of Walls to ripen their Fruit, which need so great Room for spreading as Pears, except it be Figs; a few Trees of which may be planted against the same Walls where there is Room; tho' these may be planted against the Back-walls of Offices or Stables, where there is Conveniency, because this Fruit is seldom coveted by Servants; and being planted in Places which are much frequented, they will not be in so much Danger of being destroyed by Birds, as those which are in private Places. But I shall now proceed to give some Directions for the Building of Hor-walls, to promote the ripening of Fruits, which is now pretty much practised in *England*.

In some Places these Walls are built at a very great Expence, and so contrived as to consume a great Quantity of Fuel; but where they are judiciously built, the first Expence will not be near so great, nor will the Charge of Fuel be very considerable; because there will be no Necessity of making Fires more than two Months, or at most ten Weeks; beginning about the Middle of *January*, and ending by the Beginning of *April*, when there will be no want of Fires, if the Glasses are close shut every Night, or in bad Weather: for half an Hour's Sun-shining on the Glasses at this Season, will sufficiently warm the Air inclosed in the Glasses, for the Growth of any of our *European* Fruits.

There are some Persons who plant Vines and other Fruit-trees by the Sides of Stoves, and draw some of their Branches into the Stove, in order to obtain early Fruit; but this is by no means right, because where the Stove is designed for the Ananas, the Air must be kept much warmer for them, than is required for any of the other Fruits, so that they can never do well together; for when there is a sufficient Quantity of Air admitted, to promote the Growth of the other Fruit, the Ananas are starved for want of a proper Heat; and so, on the contrary, when the Stove is kept up to the proper Heat for the Ananas, it will be too hot for Fruit. And it will also be proper to have the Vines on a particular Wall by themselves, because these require to have a greater Share of Air admitted to them. When they begin to shoot, then Peaches or Nectarines, are proper so that it is by much the better Method to have them separate.

The ordinary Height of these Hot-walls is about ten Feet, which will be sufficient for any of those Sorts of Fruits which are generally forced; for by this the Trees are commonly weakened in their Growth, so that they will not grow so vigorously as those which are always exposed to the open Air; and where there is not a Quantity of Walling planted sufficient to let one Part rest every Year, the Trees will never be very healthy, and will last but a few Years. The Quantity of Walling to produce early Fruit for a middling Family, can't be less than eighty or one hundred Feet in Length; so that where a Person is desirous to have the Fruit in Perfection, and the Trees to continue in a good Condition many Years, there should be three times this Quantity of Walling built; so that by dividing it into three Parts, there will be two Years for the Trees to recover their Vigour between the Times of their being forced; whereby a greater Quantity of Bearing-wood may be obtained, and the Fruit will be fairer, and in larger Quantities than when they are forced every Year, or every other Year; and as the Glasses may be contrived so as to move from one to the other, the Expence of building the Walls so much longer, will not be vastly great, because the Frames and Glasses will be the same as for one Year's Fruit.

The Foundations of these Walls should be made four Bricks and a half thick, in order to

support the Flues; otherwise, if Part of them rest on Brick-work, and the other Part on the Ground, they will settle unequally, and soon be out of Order; for where-ever there happen any Cracks in the Flues, thro' which the Smoak can make its Escape, it will prevent their Drawing; and if the Smoak gets within the Glasses, it will greatly injure the Fruit. This Thickness of Wall need not be continued more than six Inches above the Ground, where should be the Foundation of the first Flue; which will raise it above the Damps of the Earth: then the Walls may be set off four Inches on each Side, which will reduce it to the Thickness of three Bricks and a half, so that the Back-wall may be two Bricks thick, which is absolutely necessary to throw the Heat out more in Front; for when the Back-walls are built too thin, the Heat will escape thro' them. The Wall in Front next to the Fruit, should be only four Inches thick: so there will be an Allowance of nine Inches for the Flues, which may be covered with ten Inch Tiles; for if they have half an Inch Bearing on each Side, it will be sufficient.

The Ovens in which the Fires are made, must be contrived on the Backside of Walls, which should be in Number proportionable to the Length of the Walls. The Length usually allowed for each Fire to warm, is forty Feet, tho' they will do very well for fifty Feet: but I would not advise the Flues to be longer than this to each Fire; because when they are made too long, there is a Necessity of making the Fires so much stronger to warm them; which will occasion the Heat to be too violent near the Fires. These Ovens should be shedded over, to keep out the Wind and Rain, otherwise the Fires will not burn. Some People make these Sheds of Timber, but it is much better to build them of Brick, and tile them over; because the wooden Sheds will in a few Years decay, and afterwards will be a constant Charge to keep in Repair; and besides, they may be in Danger of firing, if great Care is not constantly taken of the Fires. As it is absolutely necessary to have the Ovens below the Foundation of the first Flues, so there must be Steps down into the Sheds, to come to the Mouth of the Ovens to supply the Fuel. Therefore the Sheds should not be narrower than eight Feet in the Clear; for as the Steps will require four Feet Space, so there should be at least four Feet more for the Person who attends the Fire to have Room to turn himself to clear out the Ashes, and to put in the Fuel. Where the Length of Walling requires two Ovens, it will be proper to have them in the Middle included in one Shed, which will save Expence, and allow more Room to attend the Fires; for in this Case the Sheds must be at least ten Feet long, and then they need not be more than six in Breadth. The Steps down into these should be at one End, so that the Door opening into the Sheds, will not be opposite to the Mouths of the Ovens: therefore the Fires will burn more regular; for whenever the Doors are contrived to front the Mouth

of

of the Ovens, if the Wind sets directly against them, it will cause the Fire to burn too fiercely, and the Fuel will be soon consumed.

These Ovens may be contrived in the same manner as those which are already described for Stoves: so I shall not repeat it again in this Place; but must observe, that when the two Ovens are joined together, there should be a Partition-wall at least two Bricks thick between them, otherwise the Fires will soon destroy it; and if there should be the least Hole in the Wall, through which the Smoak of the two Fires can communicate, it will prevent their Drawing.

The lower Flue, thro' which the Smoak first passes from the Fire, may be two Feet and a half Deep; so the Back-wall should be continued two Bricks thick as high as to the Top of this Flue; and then it may be set off to a Brick and half Thickness, which must be continued to the Top of the Wall. The second Flue, which should return over the first, may be made two Feet deep, the third a Foot and half, and the fourth one Foot deep; which four Flues, with their Coverings, will rise near eight Feet in Height; so that there will be about two Feet left for the fixing of the Frames at the Top to support the Glasses, and for coping the Wall. And these four Returns will be sufficient to warm the Air in the Frames; for the Smoak will have lost its Heat by the time it has passed thus far.

In the carrying up of these Walls, there should be some strong Iron Hooks fastened at convenient Distances, which should project about three Inches from the Wall, to which the Trelase must be fastened, which is to support the Trees. These Hooks should be long enough to fasten into the Back-wall; for the Wall in Front, being but four Inches thick, will not be strong enough to support the Trelase. But in placing of them, Care should be had not to lay them cross the Middle of the Flues, because they would obstruct the Clearing of the Flues of Soot, whenever there should be Occasion. So that the best Way is to lay them just under the Tiles which cover each Flue, at about three Feet asunder, which will be near enough, provided the Hooks are made sufficiently strong. As the Flues must be well plastered with Loam on their Inside; so also should the Loam be spread under the Tiles which cover them to the Thickness of the Hooks, that the Flues may be very smooth; otherwise the Soot will hang to the Iron Hooks, and stop the Smoak from passing. It will also be very proper to cover these Flues on the Side next the Trelase with Hop-bags, or some such coarse Cloth, in the same manner as hath been directed for the Stoves; which will make them so tight, that no Smoak will find its Way thro', which, without this Covering, it is very apt to do, thro' the Joints of Walls; especially when they are so thin as these must be built. And this Covering will also strengthen the Wall of the Flues, and join the whole Work together. If at each End of these Flues, there are small Arches turned in the Back-walls, in such a manner that there may be Holes opened to clean

the Flues of Soot; whenever there is a Necessity for it, the Trouble will be much less than to open the Flues in Front; and there will be no Damage done to the Trees, nor will the Flues be the least injured by this, which they must be, when they are opened in Front.

The Borders in Front of these Hot-walls, should be about five Feet wide, which will make a sufficient Declivity for the sloping Glasses; and in these Borders there may be a Row of dwarf Pease planted to come early, or a Row of dwarf Kidney-beans, either of which will do very well; and if they are not planted too near the Trees, will not do them any Injury. On the Outside of these Borders should be low Walls erected, which should rise about an Inch or two above the Level of the Borders; upon which the Plate of Timber should be laid, on which the sloping Glasses are to rest. And this Wall will keep up the Earth of the Border, as also preserve the Wood from rotting.

The Glasses which are designed to cover these Walls, must be divided into two Ranges; for as they must reach from the Ground-plate (just above the Level of the Border) to almost the Top of the Wall, so they will be near twelve Feet long; which will be too great Length for single Frames, which, when they are more than six Feet long, are too heavy to move, especially if the Frames are made of a proper Strength to sustain the Glafs. These Frames should be contrived in such manner, as that the upper Row may slide down; and by making on one Side three small Holes in the Woodwork which supports the Frames, at about a Foot Distance, and having a small Iron Pin to fix into them, the top Glasses may be let down one Foot, two Feet, or three Feet, according as there may be Occasion. The lower Row of Glasses may be contrived so as to take easily out: but as they must lie sloping, and the upper Row must bear on them, so they cannot be contrived to slide upwards, nor indeed will there be any Occasion of their Moving, because it is much better to let the Air in at the Top, than in the Front of the Trees.

The sloping Timbers which are to support the Glafs-frames, must be fastened at Bottom, into the Ground-plate in the Front of the Border, and at the Top into strong Iron Cramps fixed in the upper Part of the Wall for that Purpose. These Timbers should be made of Fir, which will not twist as Oak and some other Wood will, where it is laid in such Position. They must be made substantial, otherwise they will not last many Years, especially as they are designed to be moveable. On the Top of these should be fixed a strong Board, under which the upper Row of Glasses should run. The Use of this Board is to secure the upper Part of the Glasses from being raised by the Winds, and also to keep the Wet from getting to the Trees. Therefore it should be joined as close as possible to the Wall, and should project about two Inches over the Glafs-frames; which will be enough to throw the Wet on the Glasses, and likewise to secure them fast down.

The Breadth of these Frames for the Glasses may be about three Feet, or a little more, according as the Divisions of the Length of the Wall will admit; for a small Matter in their Width is of no Consequence, provided they are not too wide to be easily moved; for when they are wider than a Man can easily reach with his Arms to manage, they will be very troublesome to carry from one Place to another. The Bars of these Frames which are to support the Glass, should be placed lengthwise of the Frames; for when they are placed a-cross, they stop the Moisture which is lodged on the Inside of the Glasses, and cause it to fall in Drops on the Border at every Bar; which will be very injurious to any Plants which are put there, and if it falls on the Trees, will greatly damage them, especially when they are in Blossom. The Lead into which the Glasses of these Frames are fixed, should be very broad, and the Joints well cemented; otherwise the Wet will find an easy Passage thro', and do great Damage to the Fruit.

At each End of the Range of Glasses, there will be an angular Space between the Glasses and the Wall, which must be closely stopped to prevent the Air from getting in, which might greatly injure the Fruit. These are by some Persons closely boarded up; but if they are closed with Glasses, so contrived as to open to let in Air at proper times, it will be of great Advantage; because, when the Wind may be too strong against the front Glasses, one or both of these end Glasses may be opened, according to the Warmth of the Air inclosed; which will be often very useful to cool the Air, and to admit a small Quantity of fresh Air to the Fruit.

The Sorts of Fruit which are usually planted for Forcing, are Cherries, Plums, Peaches, Apricocks and Nectarines. As for the Vines, I would propose they should be planted by themselves against a particular Wall; for as they will require more Air to be admitted to them when they begin to shoot, than any of the above-mentioned Fruits; so they will not all succeed, if they are included in the same Frame. As to the others, they will do very well in the same Border, and will require the same Temperature of Warmth. The best of these Sorts to plant against these Hot-walls, are those here-mentioned.

Cherries.

The Early May, and May Duke.

Plums.

The Jean Hative, or White Primordian.

The Early Black Damask, or Morocco.

The Great Damask Violet of Tours.

The Drap d'Or.

Peaches.

The Red Nutmeg.

The Red Magdalain.

The Montauban.

Nectarines.

Fairchild's Early Nutmeg.

The Elruge.

Apricock.

The Masculine.

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These are the Sorts which ripen early, so are the most proper to plant against these Walls, altho' they are not so valuable as some other Sorts of these Fruits: yet as they ripen naturally three Weeks or a Month earlier in the Season; so they will be very early ripe, when they are brought forward by artificial Warmth.

In the preparing of the Borders for planting of these Fruit-trees, there should be the same Care taken, as for those against open Borders; which being fully treated in the former Volume of the *Gardeners Dictionary*, I shall not repeat here. There must also be the same Care in training up of the Trees, when they shoot; but the Trelases need not be made against these Walls, until the Trees are grown large enough to spread, and produce a Quantity of Fruit; till which time they may be supported by any low ordinary Trelase, which will do very well till the time that the Trees will have Strength enough to force, which will not be until the fourth or fifth Year after planting, according to the Progress they have made; for if they are forced too young, it will weaken them so much, as that they seldom make vigorous Trees afterwards. Besides, the Quantity of Fruit which such young Trees produce, is not worth the Expence and Trouble of Forcing: for the Quantity of Fuel used, and the Trouble, will be the same for small Trees, which are not capable of producing more than six or eight Fruit each, as for those Trees which may produce three or four dozen. So that the greater time the Trees have to grow before they are forced, the better they will pay for the Trouble and Expence.

But it will be the best Way not to have any of the Frames made, nor the Trelase or any other of the Woodwork, until the Trees are strong enough to force: for if these are done when the Walls are first built, as is by some Persons practised, they will be half decayed, before there is any Use for them. But then the Persons who are employed in making of the Trelase, must be very careful, in putting of it up, not to injure the Trees.

When the Trees have acquired Strength enough to produce a Quantity of Fruit, that Part which is designed to be forced the following Spring, should be carefully pruned at *Michaelmas*; when the very weak Shoots must be either intirely cut out, or pruned very short, because these, by being forced, will for the most part decay; and tho' some of them may be full of Flower-buds, yet these Shoots being weak, cannot nourish them; so that the Flowers having exhausted all the Sap, the Shoots die soon after, and rarely produce any Fruit. The other more vigorous Shoots should also be shortened to a proper Length, after the same manner as is directed for those Trees in the open Air; with this Difference only, *viz.* That these which are designed for Forcing, should not have their Shoots left so long, because the Forcing of them will weaken them; and so consequently, should there be as great a Length of Branches, there will probably be a greater Number of Fruit on them; because, as these

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will be screened from the open Air, so they will not be liable to Blasts; and the having too many Fruit on the Trees, will render them small, and also weaken the Trees too much. Then the Shoots should be all regularly fastened to the Trelase, at a proper Distance from each other, so that when the Branches shoot the following Spring, they may not over-hang each other. The Reason for my advising these Trees to be pruned so early in the Season, is, that those Branches which are left on, may enjoy the whole Nourishment of the Sap; so that the Buds will become very turgid during the Winter Season, and will be prepared to open when the Fires are set to work.

The time for beginning to make the Fires, is about the Middle or latter End of *January*, according as the Season is more or less favourable; for if the Trees are forced too early into Flower, they will be in some Danger of miscarrying, if the Weather should prove severe; so that it is by much the surest Method to begin about the time here directed, because there will be a Necessity of admitting fresh Air to the Trees when they are in Flower; which cannot be done with Safety, when they flower in very bad Weather. And those Trees which are forced into Flower by the Beginning of *February*, will ripen their Fruit as early as most People will desire to eat them; for the Cherries will ripen early in *April*, and the Apricocks by the Beginning of *May*; and soon after the Plums, Peaches and Nectarines will be ripe.

There are some Persons who plant Strawberries in their Borders before their Fruit-trees, in order to have early Fruit, which often succeed very well: but where-ever this is practised, great Care should be taken to keep them from spreading over the Border, because these Plants will exhaust the principal Goodness of the Earth, and thereby injure the Trees; so that when it is designed to have Strawberries in these Borders, I would advise, that the Roots should be either planted in Pots, or singly at a good Distance on a shady Border of loamy Earth, one Year before they are designed to be forced; during which time the Runners should be diligently pulled off, to encourage the main Roots for Fruiting: and at *Michaelmas* these Plants may be transplanted, with large Balls of Earth to their Roots, into the Borders before the Fruit-trees which are to be forced the following Spring, so that they may have time to get new Root before that Season; and if these Plants are carefully watered when they begin to shew their Flower-buds, they will produce a good Quantity of Fruit, which will ripen the latter End of *April*, or the Beginning of *May*. But then I would also advise, that these Plants be taken away so soon as they have done Bearing, that they may not rob the Trees of their Nourishment.

Since I have mentioned this Method of having early Strawberries, I shall take the Liberty to insert another Method, which is often practised to obtain this Fruit early in the Spring, tho' it doth not so properly come under this Article; which is, to train up the Plants either

in Pots or Borders, after the manner before directed, for at least one Year or more; then, about the Beginning of *February*, there should be a moderate Hot-bed prepared, in Length proportionable to the Number of Plants designed to be forced; and the Breadth should be proportionable to the Width of the Frames which are designed to cover them. These Frames may be such as are used for common Hot-beds, to raise early Cucumbers, &c. This Hot-bed must be covered with fresh loamy Earth about eight Inches thick, into which the Strawberry Plants should be placed, with large Balls of Earth to their Roots, as close as they can conveniently be planted (for as they must be kept clear from Runners, so they will not spread much during the time they remain in the Bed, which will be no longer, than until their Fruit is gone). Then they should be gently watered to settle the Earth to their Roots, which must be frequently repeated as the Earth becomes dry, otherwise they will produce but few Fruit. While the Nights continue cold, the Glasses of the Hot-bed should be covered with Mats, to preserve a kindly Warmth in the Beds; but in the Day-time, when the Weather is favourable, the Glasses should be raised to admit fresh Air to the Plants; for if they are too much drawn, (especially when they begin to flower) they will not produce much Fruit. If the Season should continue long cold, and the Heat of the Beds should decline, it will be proper to lay some fresh Hot-dung round the Sides of the Beds to renew their Heat, being always careful not to make them too hot; for that will scorch their Roots, and prevent their Fruiting. If the Plants which are planted in these Beds are strong, and in a good Condition for Bearing; and Care be taken in transplanting of them to preserve good Balls of Earth to their Roots, as also to keep a due Temperature of Warmth in the Beds; they will produce ripe Fruit by the End of *April*, or the Beginning of *May*, in Plenty; and will continue bearing, until some of those in the open Air come in to succeed them.

The best Kinds of Strawberries to plant for Forcing, are the Wood, and the Scarlet, for the Hautboys grow too rampant for this Purpose.

But to return to the Subject of Hot-walls: what I have here inserted concerning the Forcing of Fruits, has been only to obtain these Fruits earlier in the Season, than they would naturally ripen against common Walls. But in some Parts of *England*, where most of our good Kinds of Fruit seldom ripen, it might be very well worth while to build some of these Walls, to obtain good Fruit from the best Kinds of Peaches, Plums, &c. especially in such Places where Fuel is Plenty, because there the Expence will not be great after the first Building of the Walls. For I would not propose to have Coverings of Glass, excepting for a small Proportion of the Walls; the rest may have Frames of Canvas to shut over them, in the same manner as the Glasses are contrived; which will succeed very well, where proper Care

is taken; for as there will not be Occasion to cover these Trees until the latter End of *February*, at which time also the Fires must be made; so before the Trees are in Flower, the Weather may be frequently warm enough to open the Covers to admit Sun and Air to the Trees in the Middle of the Day: for if these Covers are kept too closely shut, the Shoots of the Trees will draw very weak, and their Leaves will turn pale, for want of Light and Air. And as the Design of these Contrivances is only to bring the Trees five or at most six Weeks earlier, than they would naturally come against common Walls; so there will be no Necessity of making very large Fires, or keeping the Covers too closely over the Trees.

Instead of Canvas for these Covers, oiled Papers may be used; which should be done in the manner directed for raising of Melons, by pasting as many Sheets of Paper together, as will fit the Frames on which they are to be fixed; and when the Paist is dry, the Paper should be fastened into the Frames, and then the Oil rubbed over on the Outside with a Brush, which will soak thro' the Paper; and when the Paper is dry, the Covers may be used. This Paper will last very well one Season, and the Expence of repairing it will not be very great: so these are to be preferred to the Canvas, because all Sorts of Plants will thrive much better under them, than they will under Canvas, or any other close Covering, which will not admit the Light so well thro' to the Plants.

The Frames designed for either Canvas or Paper, may be made much slighter than those for Glass; because these being very light, will not require much Strength to support them. And if these are well painted, and every Year, when their Use is over, carried into Shelter, they will last a long time; for they will not be wanted abroad longer than four Months; *viz.* from the End of *February*, to the End of *May*; for after this time the Fruit will not require any Covering, the Trees being then full of Leaves, and the young Shoots will by that time have made such Progress, as to become a good Defence for the Fruit. But these Covers should not be too suddenly taken away, but by degrees the Trees should be inured to the open Air; otherwise the Change will be too great, and may occasion most of the Fruit to fall off, especially if cold Nights should follow.

By this Method Gentlemen may be supplied with most of the best Kinds of Fruit, in the northern Parts of *England*; where, without some such Care, they can expect very little good Fruit in their Gardens. And as Coal is very Plenty in those Places, so the Expence will be very little; therefore I am surpris'd, that most of the Gentlemen who live in the North, do not put this Method in Practice. That there are some few of these Walls built in the North, is well known; but then they are chiefly designed to produce a little early Fruit, more for Curiosity than any real Use: and these Walls are for the most part so ill contrived,

that four times the Fuel is expended, as will be required when the Walls are built after the manner here directed: and where the Heat is not pretty equally distributed thro' every Part of the Wall, some of the Trees will have too much Heat, while others will have little Benefit from the Fires.

There are some Persons who build their Hot-walls in such a manner, as to have the greatest Heat under the Border, near to the Roots of their Trees, supposing there is a Necessity of Heat to the Roots as well as the Branches; but this is a great Mistake, and the Fires must greatly injure the Roots of the Trees, by drying up the Moisture of the Earth, as also in scorching the tender Fibres of those Roots which lie near them. Therefore this Practice should not be continued; for it is much the better Method to elevate the first Flue nine Inches or a Foot above the Level of the Border, according as the Ground is dry or wet, than to place it the least below Ground; which will only dry the Earth, and not warm the Air about the Trees, which is the only Use of artificial Heat; for it is very commonly practised to draw a Branch of a Vine or other Fruit-tree into a Stove, which Branch will produce its Fruit as early as if the whole Tree had been forced; when at the same time all the other Branches of the same Tree, which are exposed to the open Air, will not be the least forwarded, tho' they are all nourished by the same Root; which is a plain Proof, that there is no Necessity of adding any Warmth to the Roots of Fruit-trees, to have their Fruit earlier or better ripened.

I have also heard of some Walls which have been built for Forcing of Fruit, with one continued Chasm from their Bottoms to the Top; so that they have been like double Walls, with Places at proper Distances to make the Fires. But these can be of little Use; for if the Vents are open at their Tops to let out the Smoak, the Heat will also escape with it; for if the Smoak be not led about three or four times in Flues, in order to warm the Bricks, the Heat will pass off at the Top, without doing much Service to the Trees.

Where the Walls are planted with the best Kinds of Fruit, which are designed to ripen them in Perfection; if the Autumns should prove cold, or very wet, before the Fruit are ripe, it will be proper to put the Covers over the Trees; and if there are some slow Fires made to dry off the Damps, it will be of great Use to prevent the Fruit from growing mouldy, and to hasten their Ripening. But when this is practised, the Covers should be taken off whenever the Weather will admit of it, that the Fruit may enjoy the Benefit of the free Air, without which they will be insipid or ill-tasted.

Altho' in the former Directions for Forcing of Trees, for to have early Fruit, I have advised, that such Trees should have one or two Years Rest, in order to recover Vigour; yet that is not to be understood of these Trees, which are only designed to be brought forward enough

enough to produce their Fruit in Perfection : for as the Fires are not designed to be made till the Middle or End of *February* ; so the Trees will not be weakened thereby, because they will be inured to the open Air long before their Fruit is ripe, and will have time to ripen their Shoots, and form their Buds, for the next Year's Bearing : therefore these Trees may be thus forced every Year, without doing them any Injury, provided the Trees are carefully managed.

In Forcing of Fruit-trees, People generally hang up Thermometers under their Glasses, for the better adjusting the Heat, and regulating of the Fires. But when this is practised, they should be hung where the Sun can never shine on them ; for one Hour's Sun-shine upon the Ball of the Thermometer, in the Spring of the Year, will rarefy the Spirits so much, that they will rise to the Top of the Tube ; when at the same time the circumambient Air may not be much more than of a temperate Heat. But as the principal Use of these Thermometers is to regulate the Fires, so they are seldom of much Use in the Day-time ; because, if there be only one Hour's Sun-shine in the Day on the Glasses, it will warm the Air sufficiently for the Production of *European* Fruits, without any additional Heat ; so there will rarely be any Occasion for continuing of the Fires in the Day. And if by the Fires in the Night, the Air is warmed to the temperate Point marked on Mr. *Fowler's* Botanic Thermometers ; the Fruit will thrive much better than in a greater Heat.

There are some Persons near *London*, who make it their Business to produce early Fruit to supply the Markets with ; which they perform by the Heat of Dung only, having no Fire-walls in their Gardens. The Method which these People follow, is to have a good Quantity of new Dung laid in a Heap to warm (after the same manner as is practised for making of Hot-beds) : when this Dung is in a proper Temperature of Heat, they lay it close on the Backside of their Fruit-wall, about four Feet thick at the Bottom, and sloping to about ten Inches or a Foot thick at the Top. This Dung should be gently beat down with a Fork, to prevent the Heat from going off too soon ; but it should not be trodden down too hard, lest that should prevent its Heating. The Outside of the Dung should be laid as smooth as possible, that the Wet may run off more easily ; and if there is a Covering of Thatch, as is sometimes practised, it preserves the Dung from rotting too soon : so the Heat is continued the longer. The Time for laying of this Dung to the Back of the Wall, is the same as for making of the Fires, (*i. e.*) about the Middle or End of *January*. This first Parcel of Dung will continue warm about a Month or five Weeks, when there should be a fresh Supply of new Dung prepared, and the old taken quite away, or mixed up with this new Dung, to renew the Heat ; which, if it works kindly, will be sufficient to last the Season. These Walls are covered with Glasses or Canvas, in the same manner as the

Fire-walls ; and the Trees must be treated the same way : but there must be more Care taken to open the Glasses against these Walls, whenever the Weather will permit ; otherwise the Steam of the Dung will occasion a great Dampness thro' the Wall ; which, if pent in about the Trees, will be very pernicious to them, especially at the time they are in Flower.

By this Method some Gardeners have forced long Walls filled with old well-grown Fruit-trees, which have produced great Quantities of Fruit annually, so have well answered their Expence. But as in many Parts of *England* it will be very difficult to procure a sufficient Quantity of new Dung for this Purpose ; so the Fire-walls are the most useful, and least expensive.

I have seen in some Places long Timber-fences erected to force Fruit-trees, by laying of new Dung against the Backside, in the same manner as is practised for the Walls ; but these are by no means proper, because the Steam of the Dung will easily get thro' every little Crack or Joint of the Boards, to the great Prejudice of the Trees : besides the Boards will continue very damp, so long as any Moisture remains in the Dung, which will also be very injurious to them ; and as these Boards will in a few Years decay, so these will be the most expensive, if they are kept in Repair for some Years, and will never answer the Design so well as Walls.

WILDERNESS.

In the former Volume of the *Gardeners Dictionary*, I laid down some Rules for the designing, planting, and managing of Wildernesses, so as to render them magnificent and beautiful ; to which I shall here add a few Instructions, which will explain some of those Rules, which have been by several Persons misapplied, by mistaking what I had there inserted.

As to the planting of the Trees in Wildernesses, according to their different Growths, I did not thereby mean to have whole Lines of the same Sort of Tree, but as many different Sorts of Trees as the Soil or Situation would admit, observing to place those of the largest Growth toward the Inside of the Quarters, where they are so situated as to have Openings round them. But if the Boundaries of the Quarters are at the Extremity of the Garden, and there are no Prospects beyond them worth enjoying ; then the largest Trees should be placed next to the Boundaries, and the several Trees of lower Growth planted before them in form of a Slope. But in this I would not be understood to mean, that the Trees should all of them be so chosen and planted, as to form a regular even Slope, which would have too uniform an Appearance to be entertaining to the Sight. Therefore all that I design by this Method of Planting is, that every Tree may appear to the Sight at a proper Distance, that the Extent of the Plantation may be viewed ; which is too frequently obstructed by the planting of large Trees near the Walks and Openings, and placing of low Trees and Shrubs behind them.

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In the planting of these Trees, there are two principal Things to be regarded: the first is, To dispose them in such a manner, that the different Colours of their Leaves may appear in some sort like the Lights and Shades in Pictures. The second is, That their different Manners of Growing may be considered, and so placed as to make so many irregular Breaks in the Plantation, as the Size of the Ground will admit. For Instance, by mixing some Trees, whose Heads grow in a pyramidal Form, amongst others whose Heads are globular or conical, which will make the whole appear more picturesque and agreeable. But where the Plantation is very large, and is seen from a great Distance, there the Trees should be so planted, as that several Trees, whose Growth and the Colour of their Leaves appear the same, may be joined near each other, that their Shades, and the Breaks which they make, may be distinguished; for when single Trees of each Sort are intermixed amongst others of different Kinds, they do not strike the Eye in large Plantations near so well as when many of a Kind appear in Clumps.

In Plantations of Evergreen-trees, there may be a greater Diversity made in regard to their several Forms of Growth, than there can be amongst the deciduous Trees; because there are several Sorts of Evergreens, which naturally grow in form of Pyramids; and there are others which grow in form of Cones, and some which spread and extend their Branches in various irregular Figures. And these are also of very different Shades; so that when they are properly disposed, they will make a beautiful Appearance; especially in the Winter Season, when other Trees are destitute of Leaves. But that any Person who is desirous to make one of these Plantations, may not commit a Blunder, by not knowing the different Forms of the Growths of these Trees, I shall here mention some of the most known Evergreens, distinguishing them according to their Growths.

Pyramidal Evergreen-trees.

Common or Spruce Firr.

Silver Firr.

Cornish long-con'd Firr.

Balm of Gilead Firr.

Lord Weymouth's Firr.

Cedar of Virginia.

— of Carolina.

— of Bermudas.

Conical Evergreen-trees.

Manured Pine.

Scotch Pine.

Pinaster, or Wild Pine.

Cluster Pine.

Jersey Pine.

Strawberry-tree.

Ilex.

Bays.

Cork-tree.

Spreading Evergreen-trees.

Alaternus's.

Phillyrea's.

Holly.

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Cedar of Libanus.

Laurel.

Laurel-leav'd Tulip-tree.

Tamarisk.

Laurus Tinus.

As to the different Heights to which these Trees naturally grow, that will be described in a Catalogue added at the End of this Volume; where all the different *Species* of Evergreen-trees and Shrubs will be enumerated and ranged according to the several Sizes to which they usually grow in this Country.

Altho' I have advised in the former Volume, not to mix Evergreen-trees with those which lose their Leaves; yet by that I did not intend intirely to separate them in all Plantations, but only to avoid the confused manner of planting them together, which is too often practised by unskilful Persons, many times to the great Prejudice of the Trees; because several of the Evergreens will be starved, if they are planted too near some Sorts of deciduous Trees: besides the Soil will rarely suit all the Sorts which are thus injudiciously mixed together; so that if some of the Sorts are such as the Soil is naturally disposed to nourish; the others, which require a very different Soil, will not thrive amongst them.

The best Situation for most of the largest Evergreen-trees, is to plant them in open Groves, where they will thrive much better, than if they are crowded too close together; and if these Groves are judiciously placed, they will be great Ornaments to large Gardens.

In the planting of very large Wildernesses, there should be Care had to fill up the Ground on each Side of the private Serpentine-walks, with Shrubs and Underwood, in such a manner, as that where the Walks twist so much, as in some Places to be but a small Distance apart, the Wood may be so thick as to prevent the Seeing from one Walk to the other. This must be more particularly regarded in small Gardens; where there should be as much Walking contrived, as the Ground will possibly admit. On each Side of these private Walks, should be planted a good Number of the different Sorts of Honeysuckles, which may be encouraged to climb up the Trees, and to grow rude over the adjoining Bushes. There should also be some Sweetbrier, Roses, and other sweet Shrubs planted, which will perfume the Walks in an Evening, or after Showers of Rain.

Under the large Trees may be planted Hazel, Berry-bearing Alder, Laurels, Laurus Tinus, and such other Shrubs as will grow under Shade; and if some of the common climbing Plants be placed so as to grow up the larger Trees, in the manner they are often observed in Woods, they will have a very good Effect to the Eye, and be serviceable in thickening of the Quarters, where they are narrow. And if there are a good Number of low Shrubs and Plants, such as naturally grow in Woods, scattered up and down in the Quarters under the Trees, they will appear much better than

either the common Weeds, which naturally grow there; or the Ground lying bare, as it many times does in large wilderness Quarters. Of these Shrubs and Plants, there will be a Catalogue at the End of this Volume, by which any Person may be instructed as to the Sorts, which will thrive in such shady Places.

The smaller Serpentine-walks which lead thro' the Quarters of these Plantations, must be proportioned according to the Size of the Ground: if the Quarters are very large, then the Walks may be seven or eight Feet wide, to admit of two Persons walking abreast; but in smaller Gardens, where there is desired as many Walks as can be conveniently made, four Feet in Width will be sufficient. For it will be necessary to have the Divisions between the Walks double the Width of the Walks, otherwise it will be very difficult to get the Shrubs and Underwood thick enough to render the Walks private.

If the Ground where these Wildernesses are designed to be made, is very uneven, it will still add a Variety to the Plantation, as it will also when there are very different Soils; because then a judicious Planter will adapt the several Sorts of Trees and Plants to the Soils in which they delight to grow; so that there may be a greater Variety of Sorts planted, and they will thrive much better than on a level Ground; and the Walks, by being twisted about, may be so contrived, as to be as easy to walk on, as those on the most level Spot.

If the Ground where these Wildernesses are designed to be made, hath large Trees already growing on it, they will be a great Advantage, by affording a present Shade; for the Walks may be twisted about in such a manner, as that the Trees may not interfere with them; and then by trenching and clearing the Ground round the Outfides of the Quarters, it will be fit to receive flowering Shrubs, and other Trees to face the other larger Trees; which if carefully performed, will render the Plantation very beautiful. And if under these Trees the Ground is carefully clear'd and trench'd, it will improve the Growth of the Trees, and many Under-shrubs and Wood-plants may be planted to thicken up the Quarters, so as to make the Walks private.

All Trees and Shrubs which are planted in these Wildernesses, are to be suffered to grow rude, and not to have any other pruning, than is absolutely necessary to prevent their spreading over the Walks, or too much over-bearing the neighbouring Trees or Shrubs, so that they may have an equal Advantage of the open Air; by which means there will be little Expence in keeping large Plantations of this Kind, especially after the Trees and Shrubs are well rooted in the Ground; for they will in a great measure prevent the Growth of Weeds, by overshadowing the Ground with their Branches; and there is nothing more ornamental in Gardens, when they are judiciously contrived.

Where-ever there are large Woods so situated, as that they may be taken into the Design of

the Garden, they may at an easy Expence be rendered very beautiful, by only cutting away unsightly Trees and Shrubs, and adding some flowering Trees, and sweet smelling Shrubs in proper Places, and opening Walks thro' the different Parts, which may be twisted about after an easy natural manner, so as to shew as little of Art as possible. If to this there is added some large Openings, in such Places where there are few good Trees, which may be varied in their Figures, and some little Buildings, Obelisks, Vases, Urns, &c. placed properly in them, it will add greatly to their Magnificence.

In laying out of these Walks thro' Woods, there should be a great Regard had to the neighbouring Country; so as where-ever there are any distant Objects which appear to the Sight, there should be Openings, to which the Serpentine-walks should lead, from whence the Objects may be viewed; which will be an agreeable Surprize to Strangers, after having traversed thro' many of these Walks, to be led to a fine Prospect of the adjacent Country; where a Village, Church, or some other remarkable Object, may appear to the Sight; or perhaps a River, or other large Body of Water, either of which will have a very agreeable Effect.

But as there is no laying down Rules which can suit with every Situation, so the Designing of these Wildernesses must be left to the Judgment of the Owner, or some other Person of a good Taste, who should be a little conversant with the Situation, before he begins to execute, lest many irreparable Mistakes should be made, by destroying of Trees; which has too often happen'd, when these Works have been directed by unskilful Persons, or by others who have not taken Time to consider enough the adjoining Country, so as to bring as many Objects to View as can possibly be obtained. Therefore I shall not add any further Directions, since those inserted in this Place, being added to what were exhibited in the former Volume, will be sufficient Instructions for the right laying out and planting any of these Kinds of Work.

WINE.

In the former Volume of the *Gardeners Dictionary*, is inserted a very full Account of the Method of making Wine in several Countries where it is practised; as likewise the several Arts used to preserve, amend, and adulterate Wines; so far as I could possibly get Information into these Affairs. So that what I shall here add on these Subjects, are some few Observations and Experiments which have been made since the Publication of the former Volume, which are chiefly confined to the Wines made in *England*.

From the several Vineyards which have of late Years been planted in *England*, there has as yet been very little Wine made, that has been by the best Judges thought tolerably good; this in great measure may be attributed to the wrong Exposition of these Vineyards,

yards, and to the ill Method of planting and managing of them, as hath been before observed. But besides these, there has been a great want of Skill in the making, and after-managing of the Wines, there having been very few Persons who have proceeded in this Affair with good Judgment, or Attention enough to observe the Mistakes they have made in their several Experiments. There is one common Error, into which most Persons have fallen, who have attempted to make Wines in *England*; which is by endeavouring to imitate the Wines of this or that Country, whereas there are few of the Wines which are drank in *England*, which are not brewed up to suit the Palates of the Drinkers. Therefore the chief Care in making of Wine, should be to make a plain good wholesome Liquor, without regarding the particular Flavour (or endeavouring to imitate *Burgundy* or *Champaign* Wines, &c. as most People have done): in order to which it is absolutely necessary to observe the following Directions; first, To have the Grapes as duly ripened as possible; then to gather them in a dry Season, as also to separate them from rotten or unripe Grapes, and to pull them from the Stalks before they are pressed: these are the principal Directions for the first Part of the Work. What remains afterward to be observed, is, that the Wine ferments a proper time; for if it doth not ferment long enough, or to a proper Degree, it will be continually on the Fret, so will not be clear or drinkable; and if it is suffered to ferment too long, the generous Spirit will be lost, and the Wine will soon become sour. Therefore on this Particular depends the greatest Nicety of Judgment in the making of Wine; and for this there can be no positive Instructions given; because the Seasons, and many other Accidents, may occasion a greater or less Time necessary for the Fermentation to be continued, in order to give the Wine its proper Strength and Flavour: so that it is only by a close Attention, and by many repeated Experiments, a Person will be enabled to judge rightly when the Wine has had a proper Fermentation, as also how to stop the Fermentation, when it is too violent, or continues too long.

The Method of judging when Wine has fermented its proper Time, is chiefly by the Taste; so it in a great measure depends on the Person who directs this Affair having a good Palate, to know when the Wine is in Perfection; for in hot dry Years it will require a much greater Fermentation, and to be continued longer, than in moist cool Seasons; and some particular Sorts of Grapes will take a longer Time to ferment than others; so that it is by no means advisable to mix different Sorts of Grapes together in the Press, because there are not any two Sorts but will require a different Degree of Fermentation; which will occasion the Wine to be always on the Fret.

After the Fermentation is over, there must be great Care taken to keep the Vessels full of

Liquor; as also to leave a Vent in the Bung-hole of the Vessels, for the rancid Air which is generated to pass off; for the Reasons given in the former Volume of the *Dictionary*: but it will not be proper to add any other Sorts of Foreign Wines to it, as is commonly practised, which seldom incorporate with this *English* Juice. But the best Method to add a Body to it, is to ferment the Juice, as soon as it is pressed, upon the Lees of good *Canary*, or some other strong generous Wines, which will greatly enrich the *English* Juice. But then great Care should be taken to get the Lees pure and unmixed, otherwise it will have a contrary Effect.

I have been informed by Persons who have resided in the Countries from whence we have the strongest Wines, That it is a common Method there in practice, to distil a strong Spirit from the Husks of the Grapes, which they pour into the Wine, after it has fermented a proper time; which checks the Fermentation, and adds Strength to the Wine. This is at present universally practised amongst the *Vignerons* in *Portugal*, with this Difference only; that those who are the most curious in the Quality of their Wines, take particular Care, in drawing off the Spirit, to have it as pure as possible, as also to rectify it very high, that the Quantity added to the Wine may be small, and not so distinguishable on the Palate. And those Years when their Vintage proves very bad, it is a common Practice for these *Vignerons*, or at least Wine-coopers who reside there, to procure great Quantities of Brandy from *France*, which they rectify to a higher Spirit, and mix with their Wines, before they ship them for *England*.

Since this is the Practice in the Wine Countries, it might be very well worth the Trial in *England*; to be informed of the Effects; because as our Seasons frequently prove bad, so there will be a greater Necessity of adding a Body to the Wine, in order to prevent its turning acid, which is too frequently the Case with *English* Wines.

There are some Persons who add Sugar, Honey, and other Mixtures, to their Wines, to render them palatable; but this is a very wrong Practice, for it generally causes the Wine to fret, and always renders it disagreeable to the Stomach: therefore I would by no means advise the putting any other than a few of the very best foreign Raisins into the Wine, upon which the Wine may feed, which will be of great Use to preserve it.

In some of the Islands of the *Archipelago*, it has been long practised by the Inhabitants, to boil their Wines, which gives them a good Body, and preserves them a long time. These Wines were formerly much more esteemed in *England*, than they are at present, most Peoples Palates having been vitiated by the *French* Wines, which are thin and weak; so may be drank in greater Quantities, tho' the former more generous Wines are generally esteemed more wholesome, when taken moderately. This Practice may be very well worth Trial

Trial in *England*, because in boiling, a great Quantity of the watery Parts will be thrown off, which may give the Wine a Body, and preserve it.

The adding of a Colour to the *English* Wine, is another thing which has employed the Thoughts of many Persons; some have added the Juice of Elder-berries, which, I have been informed, is also frequently practised abroad; others have added the Juice of Sloes, Mulberries, Blackberries, &c. but as none of these will add any Strength to the Wine, so they must be used sparingly; for where a Colour is desired in Wine, it will be a better Method to make use of Turnsole, which is chiefly practised by the Vintners and Wine-coopers, to give a Colour to their pale Wines, than to add too large Quantities of either of those Juices. And as a small Quantity of Turnsole will be sufficient to colour a large Parcel of Wine; so it is likewise the cheapest Tincture which can be used.

The several Practices in Use amongst the Wine-coopers, both at home and abroad, to add different Flavours to their Wines, is a Mystery which they by no means care to divulge; for I have been informed by some Persons, who have been a little acquainted with their Arts, that they can brew up Wines of almost any Sort in such a manner as to imitate the Flavour of any other Sort of Wine: but if these Wines are kept any time, they will become foul and ill-tasted; so that it may be easily supposed, that these Wines are not very wholesome to drink, tho' they may have an agreeable Flavour for a time. The Practice of mixing one Sort of Wine with another, in order to give Strength, Brightness or Flavour, to Wines, has been long in Use; and if there are no worse Mixtures, there may be little Danger in drinking of these Wines: but by the Effects which some Persons have observed, in those who have drank but small Quantities of these brewed Wines, there is great Reason to fear, that some unwholesome Things are often mixed with them.

That the Practice of mixing of one Sort of Wine with another is at present greatly used in *London*, is very obvious from the great Quantities of *Alicant* and other strong *Spanish* Wines which are imported, and bought up by the Coopers and Merchants, who are rarely known to sell any of these Sorts of Wines, pure as they bought them. Also the whole Vintage of *Barabarr*, which is engrossed by the *French* Wine-merchants in *London*, is supposed to be mixed with the low Growth of *French* Wines, to add Strength to them; since it is rarely, if ever known they sell this Wine again, simple and unmixed.

Since from what has been related in this Place, and also in the former Volume of the *Gardeners Dictionary*, it is plain, that most of the different Flavours of foreign Wines are adventitious; therefore whoever sets about to make Wine of *English* Grapes, should not be

very solicitous to add particular Flavours to it; but rather have regard to the Wholesomeness, and to give it Strength enough to preserve it; which is what should be principally regarded, because afterward it will not be very difficult to add any particular Flavour, according to the Palate of the Owner, from the Instructions which have been exhibited. For Instance, that strong Flavour which is observed in some *French* Clarets, is given by adding some dried Elder-flowers to the Juice when it is fermenting; and this may be added in a greater or less Degree, according to Persons Palates. The Flavour of *Rhenish* Wines, which many People admire, is given by adding of the Flowers of the Yellow Clary, called by some Botanists, *Colus Jovis*. The Flavour of *Frontinac* Wine may be given by adding a Quantity of the Juice of white Elder-berries, with many other Mixtures, which need not be repeated here.

The other necessary Cautions to be taken, in order to preserve Wine clear, and in good Condition, besides what have been exhibited, are, first, that the Vault in which it is placed, be under a good Building, so as not to be affected by the external Air; for if it be exposed to Rain, there will be no Possibility of keeping Wines in it, tho' the Arch may be turned with the utmost Care; and this well clayed on the Top, and paved with square Stones over the Clay; as I have several times observed, where all these have been well performed: and yet the Vaults would not keep Wine in any tolerable Condition, when the Rains in Autumn have fallen. For if the Vaults are not so contrived, as that Heat and Cold may not alter the Temperature of the Air; Wines will never continue long good in them. Therefore it will be very proper to hang Thermometers up in the Vaults, by which the Alterations of Heat and Cold may be certainly known; and if it appears, that the Spirit is ever raised in the Summer, or sunk by cold in Winter, above five Divisions from the temperate Point, there will be small Hopes of preserving the Wine which is placed in them. The next Caution should be, not to put any Quantity of other fermenting Liquors into the same Vault with the Wine; for that will often affect the Wines which are near them. Nor should new Wines be carried into the Vaults where the old Wines are kept, because when the new Wines are in a strong State of Fermentation, they will affect the whole Air of the Vaults, and alter its Temperature; whereby the old Wines will be often caused to fret, which will raise the Sediment, and foul the Wine; so that many times it becomes so ill-tasted, as not to be, by the greatest Art, ever rendered so palatable as before. There are many other things which will occur to a careful Observer, who is practised in managing of Wines, very well worthy to be considered by the Curious, which have never fallen within my Observation.

X ANTHIUM, Lesser-burdock.

The Characters are ;

It hath a flosculous Flower, consisting of many Florets, which are barren, out of which arises the Chive, supporting the Summit for the most part bifid. The Embryo's arise at a remote Distance from the Flowers on the same Plant, which become oblong Fruit, for the most part prickly, divided into two Cells, and pregnant with Seeds, which are also oblong.

The Species are ;

1. XANTHIUM. Dod. pempt. 39. The Lesser-burdock.

2. XANTHIUM Canadense majus, fructu aculeis aduncis munito. Inst. R. H. A greater Kind of the Lesser-burdock from Canada, with a Fruit armed with crooked Prickles.

3. XANTHIUM Lusitanicum laciniatum, validissimis aculeis munitum. Inst. R. H. Jagged Portugal Lesser-burdock, armed with very strong Prickles.

4. XANTHIUM Caroliniense medium, fructu torosiore. Hort. Elth. Middle Carolina Lesser-burdock, with a swelling Fruit.

The first Sort is sometimes found wild in England, tho' rarely ; but in several other Countries it grows plentifully by the Sides of Brooks, Ditches, and other standing Waters ; always delighting in a moist fat Soil. This Plant is placed in the Catalogue of Medicinals at the End of the College Dispensatory, tho' at present it is rarely used in Physic.

The second Sort was brought from Canada, where it grows very plentifully ; as also in many of the neighbouring Countries in North America.

The third Sort is a Native of Portugal, from whence the Seeds have been procured by some curious Botanists, who preserve it in their Gardens.

The fourth Sort was discovered by Mr. Catesby, in South Carolina, from whence he brought the Seeds to Europe.

All these are annual Plants, which, if permitted to scatter their Seeds in Autumn, will maintain themselves better than if they are sown in the Spring ; for the Seeds will remain in the Ground all the Winter, and the Plants will come up early the following Spring ; when they will require no farther Care but to thin them where they are too close, and to keep them clear from Weeds. In July their Flowers will begin to appear, and their Seeds will ripen in September.

The first is an humble Plant, seldom rising above a Foot high, but the second, third and fourth Sorts, will rise to be near three Feet high ; and divide into many Branches. The third Sort is often later in ripening of its Fruit, than either of the former ; so that when the

Autumns prove very cold, the Seeds do not come to Maturity ; therefore it will be proper to raise a Plant or two of this Kind on a Hot-bed early in the Spring ; which should be planted in Pots, to confine their Roots, and thereby prevent their growing too luxuriant, and cause them to put out their Flowers and Fruit much sooner ; so that their Seeds will be perfectly ripe.

XERANTHEMUM, Eternal-flower.

To this Article must be added ;

1. XERANTHEMUM incanum, flore albo. H. R. Par. Hoary Eternal-flower, with a white Flower.

2. XERANTHEMUM flore simplici minimo, dilute purpurascente. H. L. Bat. Eternal-flower, with the least single, pale, purplish-coloured Flower.

3. XERANTHEMUM flore simplici, ex albo & rubro obsoletis mixto. Hort. Cath. Eternal-flower, with a single Flower of a mix'd Red and White.

4. XERANTHEMUM flore pleno, ex albo & rubro obsoletis mixto. Hort. Cath. Eternal-flower, with a double Flower mixed with White and Red.

5. XERANTHEMUM orientale, flore minimo, calyce cylindraceo. Tourn. Cor. Eastern Eternal-flower, with the least Flower, having a cylindrical Cup.

These Plants are all of them very hardy, so may be treated in the same manner as is directed in the former Volume of the Gardeners Dictionary, for the Sorts which are there enumerated. The first, second and fifth Sorts here mentioned, are Plants of no very great Beauty ; but are preserved in some Botanic Gardens for the sake of Variety. The third and fourth Sorts produce very pretty variegated Flowers, so are worthy of a Place in every good Garden ; but at present these are very rare in the English Gardens, tho' in some of the Gardens in Holland they are pretty common, where the Flowers are dried and preserved to adorn their Rooms in the Winter Season.

XIPHION, Bulbous Iris, or *Fleur-de lys*.

To this Article must be added ;

1. XIPHION latifolium acaulon odoratum, flore caeruleo. Inst. R. H. Broad-leav'd sweet-scented Bulbous Iris, with a blue Flower, without a Stalk.

2. XIPHION latifolium acaulon odoratum, flore purpureo. Inst. R. H. Broad-leav'd sweet-scented Bulbous Iris, with a purple Flower without a Stalk.

3. XIPHION latifolium acaulon odoratum, flore lactei coloris. Inst. R. H. Broad-leav'd sweet-scented Bulbous Iris, with a milk white Flower without a Stalk.

4. XIPHION album, oris caeruleis. Inst. R. H. White Bulbous Iris, with blue Borders.

5. XIPHION Porcellana dictum. Inst. R. H. Bulbous Iris, commonly called Porcellana.

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6. *XIPHION Chamoletta Lavendulacea distum*. Inst. R. H. Bulbous Iris, called in Holland, *Chamoletta Lavendulacea*.

7. *XIPHION Chamoletta dictum, flore caeruleo, versicolor*. Inst. R. H. Bulbous Iris, with a blue variegated Flower, called *Chamoletta*.

8. *XIPHION Chamoletta dictum, flore purpureo, versicolor*. Inst. R. H. Bulbous Iris called *Chamoletta*, with a purple variegated Flower.

9. *XIPHION latifolium caule donatum, flore caeruleo*. Inst. R. H. Broad-leav'd Bulbous Iris, with a blue Flower furnish'd with a Stalk.

10. *XIPHION latifolium caule donatum, flore atro-purpurascens*. Inst. R. H. Broad-leav'd Bulbous Iris, with a dark purple Flower, furnished with a Stalk.

11. *XIPHION latifolium caule donatum, flore caeruleo, lineis violaceis aut purpureis distincto*. Inst. R. H. Broad-leav'd Bulbous Iris, with a blue Flower, mark'd with violet and purple Lines, and furnished with a Stalk.

12. *XIPHION latifolium caule donatum, flore cinereo, violaceis striis distincto*. Inst. R. H. Broad-leav'd Bulbous Iris, furnished with a Stalk, and an ash-coloured Flower, striped with Violet.

13. *XIPHION latifolium candidum*. Inst. R. H. Broad-leav'd Bulbous Iris, with a white Flower.

14. *XIPHION foliis amplioribus maculatis, flore purpureo*. Inst. R. H. Bulbous Iris with larger spotted Leaves, and a purple Flower.

15. *XIPHION foliis amplioribus maculatis, flore violaceo*. Inst. R. H. Bulbous Iris with broader-spotted Leaves, and a violet Flower.

16. *XIPHION foliis amplioribus maculatis, flore niveo*. Inst. R. H. Bulbous Iris with broader-spotted Leaves, and a snow-white Flower.

17. *XIPHION versicolor & multiflorum*. Inst. R. H. Many-flower'd variegated Bulbous Iris.

18. *XIPHION majus & humilius, flore amplo flavo vario*. Inst. R. H. Greater and lower Bulbous Iris, with a large yellow variable Flower.

These Sorts of Bulbous Iris are to be treated in the same manner as those which are enumerated in the former Volume of the *Gardeners Dictionary*, where there are full Instructions exhibited for their Management; so I shall not repeat them in this Place.

XYLOSTEON, Upright Honeyfuckle.

The Characters are;

The Flower consists of one Leaf, is tubulous, and divided into several Parts at the Top, and rests on the Empalement; these are for the most part produced by Pairs on the same Footstalk. The Empalement afterward becomes a soft double Fruit or Berry, inclosing compress'd roundish Seeds.

There is but one Species of this Plant at present known; viz.

XYLOSTEON Pyrenaicum. Inst. R. H. Pyrenean Upright Honeyfuckle.

This Plant was discovered by Doctor Tournefort on the Pyrenean Mountains, who has sepa-

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rated it from the *Chamacerasus*, on account of the Shape of its Flower, which differs so little from the Flowers of those Plants, that it doth not deserve to be removed from them; since the Fruit agrees perfectly with those of that Genus.

It grows about three or four Feet high, and divides into many Branches, after the same manner as the other Upright Honeyfuckles; the Flowers are small, and come out but sparsely on the Branches, so do not make any great Appearance. The usual Time of its flowering is in *February*, about the same time as the *Mezereon*; so may be admitted to have a Place in Gardens, amongst other hardy exotic Shrubs, in order to make a Variety. This Plant may be propagated by Cuttings, which should be planted at *Michaelmas* on a shady Border, and in a strong loamy Soil; where, if they are duly watered in dry Weather, and kept clear from Weeds, they will make good Roots by the following *Michaelmas*, when they may be removed to the Places where they are designed to remain, which should be in a strong loamy Soil, and in a cool shady Situation. For if these Plants are planted on a light dry Soil, and in an open Situation, they will not live thro' one Summer, unless they are plentifully watered in dry Weather; and even with this Care, they will make but little Progress.

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ZACINTHA, Warted-succory.

The Characters are;

It hath a flosculous Flower, consisting of many half Florets, constantly resting on the Embryos, and included in a scaly Empalement. The Empalement afterward becomes a furrowed Head, whose single Parts, or Capsule, have swelling Seeds adorned with a Down.

We have but one Species of this Plant; viz.

ZACINTHA frve cichorium verrucarum. Matth. Warted-succory.

This Plant grows abundantly in the Island of *Zant*, from whence it obtained the Name; it also grows wild in several other warm Countries, but in *England* it is preserved in the Gardens of some Persons who are curious in Botany, for the sake of Variety; there being little Beauty or Use at present known in this Plant.

It is an annual Plant, which perishes soon after the Seeds are ripe; so must be sown every Year, or the Seeds permitted to scatter on the Ground in Autumn, which will come up in the Spring, and furnish a Supply of Plants more certainly than when the Seeds are sown in that Season; for very often the Seeds which are sown in the Spring, will remain in the Ground a whole Year before the Plants come up; and sometimes they entirely miscarry; whereas those Seeds which scatter in Autumn, or are sown at

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at the same Season, rarely fail. When the Plants are come up, they will require no other Care, but to thin them where they are too close, so as to leave them about six or eight Inches asunder; and after this to keep them clear from Weeds. In *June* these Plants will begin to Flower, and their Seeds will ripen the End of *August*, or the Beginning of *September*.

The Flowers of this Plant are small, and generally produced singly from the Divarications of the Branches, somewhat after the manner of *Succory*; the Flowers are of a yellow Colour, and resemble those of Hawkweed.

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After the Flowers are past, the Empalement swells to a furrowed Head, somewhat resembling Warts or Excrecencies, in which the Seeds are included.

When the Seeds of this Plant are sown in the Spring, it should be done in Drills made about two Feet asunder; and when the Plants are come up, they should be thinned to the Distance of six Inches in the Rows; because they do not thrive very well when they are transplanted, so that they should remain in the Places where they are sown; and if they are kept clear from Weeds, they will require no other Care.



ADDENDA.



A D D E N D A.

In this Place several Plants are treated of, which have not been mentioned in the former Part of this Work: many of them having been lately introduced into England; therefore have not been reduced to their proper Classes, their Characters having never been properly examined by any skilful Botanist.



ARBOR. *baccifera laurifolia aromatica, fructu viridi calyculato racemoso.* Sloan. Cat. Jam. The Winters-bark, or wild Cinnamon-tree.

This Tree grows in the low Lands of the Island of *Jamaica* in great Plenty, where it rises to the Height of thirty Feet or more, and divides into many Branches, which are furnished with smooth pale green Leaves, about three Inches long, and an Inch and half broad, near their Extremity, where they are broadest. These are placed on without any Order, having short Footstalks, and one middle Rib. On the Top of the Shoots, the Flowers are produced in Bunches, which are of a purple Colour; these are succeeded by the Fruit, which are round, green, and about the Size of a large Pea, in each of which are included four shining black Seeds. The Leaves, Fruit, Bark, and every Part of this Tree, are very aromatic, hot and biting to the Taste. The Bark is used as Spice in most of the *English* Plantations in *America*; and was formerly pretty much used in Medicine in *England*, under the Title of *Canella alba*, or white Cinnamon; but at present it is not much in Use.

In *England* this Plant is preserved in some curious Gardens, but it is at present pretty rare. It may be propagated by Seeds, which must be procured from the *West Indies* (for the Plants do not produce any in *Europe*); but these should be brought over as fresh as possible, and in their Covers; otherwise they com-

monly dry up, and lose their growing Quality. These Seeds should be sown early in the Spring, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, where they must be constantly watered whenever the Earth is dry, otherwise the Seeds will not vegetate. The Glasses of the Hot-bed should be covered with Mats every Night, to preserve a proper Heat in the Bed; and in the Day-time, when the Sun is warm, the Glasses should be raised to let the Steam pass off. With this Management the Plants will appear in about five or six Weeks, (provided the Seeds are good) when they must be treated tenderly while they are young; but they must be frequently watered, for as they naturally grow in moist Places, so they will often require to be refreshed with Water; tho' while they are very young, it must be given to them in small Quantities. When the Plants are risen an Inch high, they should be carefully separated, and each planted into a small Pot filled with fresh Earth: and then plunged into a fresh Hot-bed of Tanners-bark, observing to shade them every Day from the Sun, until they have taken new Root, then they should have fresh Air admitted to them every Day according to the Warmth of the Season, and the Heat of the Bed in which they are placed. They must also be duly watered every Evening in hot Weather; but they should not have too much Water given to them at one time, especially while the Plants are young. In this Hot-bed the Plants may remain during the Summer Season; but toward *Michaelmas*, when the Nights begin to be cold, they should be removed into the Stove, and plunged into the

A D D E N D A.

the Bark-bed, where if they are duly watered, and kept warm, they will thrive very well; tho' they seldom make any great Progress the first Year, nor are they very quick of Growth in their natural Country; for I have received Plants of this Kind from the *West Indies*, which were six Years old, and these were not above two Feet high. As this Plant is very tender, so it must be constantly kept in the Stove, where during the Summer Season, it should have free Air admitted to it every Day, but in Winter it must be kept very warm, otherwise it cannot be preserved in this Country. This Plant retains its Leaves throughout the Year, so may deserve a Place in the Stove amongst other curious exotic Plants, tho' it doth not produce any Flowers in this Country.

ARBOR laurifolia venenata, folio leviter serrato oblongo obtuso, copiosum lac præbens. Sloan. Cat. The Poison-tree, vulgò.

This Tree grows plentifully in *Jamaica*, and several other Places in the warmest Parts of *America*, where it rises to the Height of twenty-five or thirty Feet, and divides into many Branches, which are beset with Leaves about the Size of those of the Bay-tree, of a very bright green Colour, and serrated on their Edges: these continue on the Trees throughout the Year, but I have never seen any Flowers produced on these Plants, nor have I met with any Account of their Flowers in any Authors who have mentioned the Plant. The whole Tree abounds with a milky Juice, which is accounted very poisonous: if the Leaves of the Tree are broken, the Juice will flow out very fast, and if it falls on Cloth, will cause it to wash in Holes, much after the same manner as the Juice of the Manchineel-tree.

This Plant is preserved by some curious Persons for the sake of Variety; but as it is very tender, it must be constantly kept in the warmest Stoves, and plunged into the Hot-bed of Tanners-bark, otherwise it will not live thro' the Winter in this Country. It may be propagated by Seeds, which should be sown early in the Spring, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark; and when the Plants are come up, they should be treated in the same manner as hath been directed for the former Sort. This Plant is pretty quick of Growth; for I have raised them upward of two Feet high in one Summer from Seeds. In warm Weather these Plants must be often watered; but as they are full of milky Juice, they must not have too much Water given to them at one time, lest it should rot their Roots.

ARBUSCULA Africana repens, folio ad latera crispo, ad polygana relata. Boerb. Ind. alt. An African trailing Shrub, with curled knot-grass Leaves, and blink Flowers, somewhat resembling those of Orach.

This Shrub is preserved in many Gardens for Variety; but there is no great Beauty

either in its Leaves or Flowers. It grows to the Height of three Feet or more, and sends out many Branches, which are slender, and if not supported, are subject to trail on the Ground; these are beset with Leaves shaped somewhat like those of Knot-grass, but are a little broader, and curled on their Edges. The Flowers are produced from the Wings of the Leaves, which have no Petals, but an herbaceous Empalement, in which are included the Chives, with their Summits, &c.

It is propagated by Cuttings (which should be planted the latter End of *May*, or the Beginning of *June*, that they may have time to make good Roots before Autumn): these may be planted in a Border where they may have only the Morning Sun; or if they are planted in an open Bed, they must be shaded with Mats until they have taken Root; they must also be frequently refreshed with Water in dry Weather. When these Cuttings are well rooted, they will require no farther Care, but to keep them clear from Weeds, until the Middle of *September*; when they should be carefully taken up with Balls of Earth to their Roots, and planted into Pots filled with light fresh Earth, and placed in a shady Situation until they have taken new Root; after which time they may be placed amongst other hardy exotic Plants, in a shelter'd Situation, where they may remain till the latter End of *October*, when they should be removed into Shelter for the Winter Season.

This Shrub is always preserved in Pots, and housed in Winter with other exotic Plants: but I have found that it will live abroad in mild Winters without any Covering, provided it is planted in a warm Situation, and on a dry Soil. However, it is proper to preserve a Plant or two in Pots to be sheltered in Winter, lest those abroad should be destroyed by Frost: but these will require no other Shelter, than that of a common Frame; where the Glasses may be drawn off every Day in mild Weather, that the Plants may have as much free Air as possible, and only secured from hard Frosts: with which Management the Plants will thrive much better, than when they are kept too close in Winter.

ARBOR baccifer Canariensis, syringæ cœruleæ foliis, purpurantibus venis, fructu monopyreno; Yerva Mora Hispanorum. Pluk. Almag. A berry-bearing Tree of the Canaries, with Leaves like the Lilac, having purplish Veins; called by the Spaniards, Yerva Mora.

This Tree has been long preserved in some *English* Gardens, but hath not as yet produced any Flowers, as I could ever learn. It has been by some Gardeners called the Golden-rod-tree, but for what Reason I do not know, since by the Shoots and Leaves, there doth not appear any Analogy between this Tree, and the Golden-rods; and as to its Flowers, I have never seen any Description of them, so cannot affirm any thing concerning their Structure.

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It is propagated by Cuttings, which may be planted during any of the Summer Months, in Pots filled with rich light Earth, and plunged into a moderate Hot-bed of Tanners-bark, where they must be duly watered, and shaded from the Sun, until they have taken Root: after which time they must be inured to the open Air by Degrees; and afterward may be transplanted each into a separate Pot, filled with rich light Earth, and then placed in the Shade until they have taken new Root; after which time they may be removed into a sheltered Situation, where they may remain till the Beginning of *October*, when they should be removed into the Green-house, and placed amongst other exotic Plants of the same Country. During the Winter-time (when they are generally destitute of Leaves) they must not have too much Wet, tho' they will require to be frequently refreshed with Moisture; but in Summer they must have plenty of Water, for they are very thirsty Plants in hot Weather.

These Plants may be removed into the open Air, about the Middle of *May*, at the same time when the Orange-trees are placed abroad; and must have a warm sheltered Situation, otherwise they will not make much Progress, for they are impatient of Cold; and if they are exposed to strong Winds, they will lose their Leaves even in the Summer Season. In Winter they must have a warm Green-house, but do not require the Warmth of a Stove, for if they are secured from Frost, they will do very well.

ARBOR Americana, fraxini foliis, fructu conoide. The Mahogany-tree.

This Tree grows chiefly on the North Side of the Island of *Jamaica*, from whence great Quantities of the Wood have been brought to *England* in a few Years past; so that at present it is one of the most common Woods in Use, for Tables and other Furniture. There are some of these Trees growing in the *Bahama* Islands, from whence some of the Wood has been brought to *England*, under the Title of *Madeira* Wood, but by the Fruit which I have received from thence; it appears to be the same as the Mahogany of *Jamaica*, tho' the Wood seems to be somewhat differing in Colour and Texture.

There are but few of these Plants in *Europe* at present, and as they are very tender, they cannot be preserved thro' the Winter in this Country, but in the warmest Stoves. They are propagated by Seeds, which should be obtained as fresh as possible, from the Countries of their natural Growth; for if they are kept a long time out of the Ground, they will not grow. These Seeds should be sown in Pots filled with rich fresh Earth, and plunged into a Hot-bed of Tanners-bark; observing to water the Pots frequently to keep the Earth moist, otherwise the Seeds will not vegetate; and if the Nights should prove cold, the Glasses of the Hot-bed must be covered with Mats, to preserve a proper Heat in the Bed; and in the Day-time,

when the Sun is very warm, the Glasses should be raised to let the Steam of the Bed pass off, as also to admit some fresh Air to the Earth. In about five Weeks after the Seeds are sown, you may expect to see the Plants appear; when they should be very carefully look'd after, to raise the Glasses whenever the Sun shines warm, as also to refresh the Plants frequently with Water; but they must not have too much Water given to them each time, while they are very young, lest it rot their tender Stems, and destroy them. They must also be kept clear from Weeds, and when the Nights are cold, the Glasses of the Hot-bed should be covered with Mats every Evening, soon after the Sun is gone off from the Bed, in order to preserve a due Temperature of Heat in the Bed. When the Plants are about two Inches high, they should be carefully shaken out of the Pots, and parted, planting each into a separate small Pot filled with light rich Earth, and then plunged into a new Hot-bed of Tanners-bark; observing to shade the Plants from the Sun every Day, until they have taken new Root; after which time they must have fresh Air admitted to them every Day, in Proportion to the Warmth of the Season, and must be duly watered in hot Weather.

The Plants may remain in this Bed during the Summer Season, but towards Autumn, when the Nights begin to be cold, they must be removed into the Stove, and plunged into the Bark-bed, where they must be kept very warm, and frequently refreshed with Water; but when their Leaves are fallen off, which is generally at the End of *November*, they must not be kept too moist, for that will cause the tender Roots to decay; but in Spring, when they put out new Leaves, they will require to be more plentifully supplied with Water. These Plants must constantly remain in the Stove; for they are too tender to live in the open Air in *England*, the warmest Part of the Year; so they should have a large Share of free Air admitted to them every Day in hot Weather, by opening of the Glasses of the Stove; but when the Air is cold, the Glasses must be kept close, otherwise the Plants will not thrive.

As these Plants are of very slow Growth, (especially in this Country) so they will not require to be often shifted into other Pots; if they are transplanted every Spring just before they put out new Leaves, it will be as often as they require shifting; at which time as much of the old Earth should be taken from about their Roots, as may be safely done without injuring the Plants; and when they are new potted, the Bark-bed should be stirred up, and renewed with some fresh Tan, which will forward the Plants in taking new Root; but if the Weather should prove very warm, and the Earth should have all fallen from the Roots in shifting; then it will be proper to shade the Plants from the Sun in the Heat of the Day, until they have taken Root; especially if they had put out Leaves before they were shifted, because the tender Leaves will soon shrink with the Heat, and fall off, where this Care

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is not taken. When the Plants come up kindly from the Seeds, and are carefully managed, they will sometimes grow six Inches in Height the first Season; but afterward they will make but slow Progress, seldom shooting above three Inches in one Year, and the whole Shoot is generally made in less than a Month, so that the Time of their Growth is but short; after which their Shoots harden, and their Leaves expand; but there are no more Leaves produced the same Year; so that when any Accident happens in the Spring to injure their young Leaves, the Plants commonly continue bare of Leaves the whole Season; for they very rarely make any new Shoots, or put out any fresh Leaves.

Altho' the Wood of this Tree is now so very common in *England*, yet there is not one Author to be found, who has mentioned the Tree, that I could ever learn; so that since the Characters are not known, it cannot be reduced to any Class of Trees; but so far as I can judge from the Fruit of this Tree, there are several other Trees which grow in the warm Parts of *America*, nearly allied to this; two of which have been preserved in some curious Gardens in *England*, so I shall insert them in this Place.

CEDRUS Barbadenfium, alatis fraxini foliis, non crenatis, fructu singulari, quinis involucris crassis validis cochleato-cavis, totidem semina membranæ adauſta, & columnæ canaliculatæ pentagonæ prægrandi adnata, occludentibus ornato. Pluk. Phyt. tab. 157. f. 1. The Barbadoes Cedar-tree.

This Tree is very common in the Islands of *Barbadoes*, *Jamaica*, and in several other Places in the warm Parts of *America*; and by some Writers it is mentioned to grow in *Virginia*; tho' I believe they are mistaken in this, for it is too tender to endure Cold, so cannot possibly live thro' the Winters in that Country, which are many times very severe. It grows commonly on dry stony Ground, and is one of the largest Trees in *America*. The Wood of this Tree is of a brown Colour, and is odoriferous; which occasioned the Inhabitants of those Countries to give it the Name of Cedar, tho' the Tree has no Affinity to any of the Sorts of Cedar known in *Europe*. The Trunks of these Trees are hollowed to make *Canoes* and *Periaguas*; for which Purpose they are extremely well adapted, because they grow to a very large Size, and the Wood is very soft, so may be cut out with great Facility. There are some *Canoes* in the *West Indies*, which were thus made of this Tree, which are near forty Feet long, and five or six Feet broad. The Wood of this Tree being very light, is frequently cut out for Shingles to cover the Houses in *America*, and is found to be very durable; but as the Worms eat this Wood, it is not so proper for building of Vessels, as some other Sorts, tho' it is often used for this Purpose, as also for sheathing of Ships. It is also used sometimes for wainscoting of Rooms, and to make Chests of, because Vermin do not so fre-

quently eat it, or breed in it, as in many other Sorts of Wood, it having a bitter Taste, which will communicate that Quality to whatever Things are laid near it, especially while the Wood is fresh.

This Tree is propagated by Seeds, which must be procured from the Countries of their natural Growth, and should be brought over in the Fruit as fresh as possible, and may be sown in Pots filled with light fresh Earth, and plunged into a Hot-bed of Tanners-bark early in the Spring, and must be treated in the same manner as hath been directed for the Mahogany, as should the Plants also when they come up; for they require the same Management, and must likewise be kept in the same Stove: but these being very fast Growers, will require to be often shifted, and must have large Pots when they arrive to a proper Size, which will be in two Years, or sooner, if they grow kindly; for I have known these Plants shoot five Feet in Height in one Season, so they should have Room to grow; for if they are confined in small Stoves, they make no Figure; whereas if they have Height and Room for their Leaves to expand, they make a fine Appearance; for the Leaves which are composed of many Wings, shaped somewhat like those of the Ash-tree, are often six Feet in Length; so hang down on every Side from the upper Part of the Tree, like Plumes of Feathers: and if the Plants are preserved in a kindly Temperature of Heat, and are duly watered, the Leaves will continue green throughout the Year; but if they are exposed to the cold Air even in the Summer Season, they will cast their Leaves. So it is the best Method to keep them constantly in the Stove, and let them have a large Share of Air in warm Weather, and constantly supply them with Water: if this is carefully performed, the Plants will make very great Progress.

I have not met with any Author who has described the Flower of this Tree, so that until the Characters are known, it cannot be reduced to any Class of Plants, tho' (as I before observed) by the Fruit, as also by the Leaves, it seems to be nearly akin to the Mahogany-tree.

There have been some Persons so weak as to imagine the Mahogany-tree might be cultivated in the open Air in *England*, and have accordingly procured the Seeds from *Jamaica*; but from all the Seeds which they have sown, not one single Plant hath been produced, nor is it likely there should, since the Plant is so tender, as not to bear the open Air in *England*, in the warmest Season of the Year: therefore this Plant can only be preserved as a Curiosity in *England*.

ARBOR excelsa, coryli folio ampliore. Houff.
A tall Tree, with a larger Hazel-leaf.

By the Fruit of this Tree, it appears to be nearly allied to the former Sort; but whether the Wood is of any Use, I cannot learn; for it grows only at *Campeachy*, where there are few other Trees regarded than the Logwood. This Tree

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Tree usually rises to three or four-score Feet in Height, and divides into a great Number of Branches, which are beset with Leaves somewhat like those of the Witch-hazel; but are larger and of a greyish-white Colour underneath, having several large longitudinal Ribs. The Fruit is shaped somewhat like a Cone, but is pointed, and opens into five Cells, in each of which are lodged winged Seeds. What Flowers this Tree produces, I cannot learn, having received the Seeds from *Campeachy*, which were gathered by the late Dr. *William Houftoun*, who observed many of the Trees, which were very large; but at the time when he was there, their Seeds were ripe, so that there were no Flowers to be seen. Since which time I have received another Parcel of the Seeds, which were gathered by Mr. *Robert Millar*, but have never received any Account of the Flower.

This Tree is also propagated by Seeds in the same manner as the two former Sorts, and the Plants must be treated in the same Way; for they are very tender, so must be constantly kept in a warm Stove, and plunged into the Bark-bed, otherwise they will not live thro' the Winter in this Country. If the Plants are warm, and duly refreshed with Water, they will thrive pretty fast, especially the first and second Years; for they will rise three Feet high the first Summer they are sown, and in two Years I have had some of the Plants upward of seven Feet high; but after this they made but little Progress.

ARBOR in aqua nascent, foliis latis acuminatis & non dentatis, fructu eleagni minore.
Catesb. Hist. Nat. The Tupelo-tree.

This Tree grows in *Virginia*, *Maryland* and *Carolina*, where it rises to a good Height, with an erect Trunk, and regular Head: the Leaves are like those of the Bay-tree. In the Autumn these Trees are full of oval black Berries, which are sustained on long Footstalks, each Berry including a hard flattish channell'd Stone. These Berries have a very sharp bitter Taste, yet are Food for several Animals.

It grows usually in moist swampy Places, so is pretty difficult to preserve in *England*; for if they are planted in dry Ground, they will not live thro' one Summer; and when they are planted in Land which is too wet, in Winter, they are in Danger of suffering by the Cold. This Tree is propagated by Seed, which should be obtained from the Countries of its natural Growth, and sown early in the Spring in Pots filled with fresh Earth, which should be plunged into a very moderate Hot-bed of Tanners-bark, and must be constantly watered four or five times a Week; and when the Weather is warm, it must be watered every Day. The Glasses of the Hot-bed must also be covered with Mats every Day when the Sun is warm, to shade the Pots; otherwise, when the Plants are young, they will be soon destroyed, if they are exposed to the Sun. During the Summer Season the Plants must be

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constantly watered every Evening in dry Weather; and they must be shaded from the Sun in the Heat of the Day with Mats; but they should not be covered with Glasses after the Middle of *May*, lest it make the Plants too tender; for they must be inured to bear the open Air as soon as possible, and may be exposed thereto, till the Middle or latter End of *October*, when the Pots should be plunged into an old Bed of Tanners-bark, under a common Frame; where the Plants may be defended from severe Frosts; but should be exposed to the open Air constantly in mild Weather. In this Situation the Plants may remain till the Beginning of *March*; when they should be carefully transplanted, each into a separate small Pot filled with fresh Earth, and then plunged into a very slow Hot-bed, which will facilitate their taking new Root; but they must be shaded from the Sun every Day when the Weather is warm, and should be constantly supplied with Water. When the Plants are well rooted in these Pots, they must be inured to the Air by Degrees; but if they are continued in the Tan-bed all the Summer, it will be of Service to them, provided they are arched over with Hoops, and shaded in the Heat of the Day from the Sun with Mats; and they must be duly watered in dry Weather. The following Winter they should be sheltered under a Frame as before; and in *March* some of the Plants which have made the greatest Progress, may be shaken out of the Pots, and planted in a shelter'd Situation, and a moist Soil, where they are designed to remain; but the other Plants may be continued a Year longer in Pots, and managed in the same manner as before.

When these Plants are planted in the full Ground, they must be placed under the Shelter of other Trees, so that they may be protected from severe cold Winds, and shaded from the Sun; but they must not be placed immediately under the Drip of those Trees; and the Ground should be well cleared from the Roots of other Trees, and some Neats-dung buried under each Tree, which will cool the Ground, and be of great Service to them in dry Weather. If every Spring the Ground is carefully dug about the Plants, and constantly cleared from all the Roots of the neighbouring Trees, and at the same time some rotten Neats-dung buried about the Plants, it will be of great Use in forwarding their Growth. And in dry Seasons they should be carefully watered until the Plants have established themselves with good Roots, otherwise they will be in Danger of suffering greatly by the Drought. But when the Roots have run to a good Depth in the Ground, they will find Nourishment, if the Place is tolerably moist where they are planted.

1. *CITHAREXYLUM arbor laurifolia Americana, foliorum venis late candicantibus, ex cujus ligno citharæ & panduræ fiunt.* *Pluk. Phyt. tab. 162. f. 1.*

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2. *CITHAREXILUM Americanum alterum, foliis ad marginem dentatis. Pluk. Phyt. tab. 161. f. 5.* Another Fiddle Wood-tree, whose Leaves are indented on their Edges.

The first of these Trees is very common in *Jamaica*, where it grows to a very great Height, and the Wood is much used in their Buildings. The second Sort was brought from *Barbados*, where it was formerly in great Plenty, but since that Island has been clear'd from Wood, there have been but few of these Trees preserved; and those grow chiefly in the *Gul-lies*, and other waste Places which have not been cultivated.

These Plants are preserved in some curious Gardens in this Country; but as they are very tender, they will not live thro' the Winter, unless they are placed in a warm Stove. They may be propagated by Seeds, which should be procured from the Countries of their natural Growth, and sowed early in the Spring, in Pots filled with fresh light Earth, and then plunged into a Hot-bed of Tanners-bark; observing to water the Pots frequently, to keep the Earth moist, without which the Seeds will not vegetate. If the Nights should prove cold, the Glasses of the Hot-bed should be covered with Mats every Evening, soon after the Sun is gone off from the Bed, in order to preserve a proper Temperature of Heat in the Bed; but in the Middle of the Day, when it is warm, the Glasses should be raised to let the Steam of the Bed pass off, as also to admit fresh Air. In about five or six Weeks after the Seeds are sown, the Plants will appear, when they must be kept clear from Weeds, and constantly refreshed with Water every other Day: the Glasses of the Hot-bed should also be raised every Day when the Weather is warm, to admit fresh Air to the Plants, otherwise they will draw up very weak. When the Plants are about three Inches high, they must be carefully turned out of the Pots and separated, planting each into a small Pot filled with fresh light Earth, and then plunged into the Hot-bed again; observing to cover the Glasses of the Hot-bed every Day with Mats to shade the Plants until they have taken new Root, after which time they must be constantly supplied with Water; and in warm Weather they should have a large Share of Air admitted to them, by raising of the Glasses, which will greatly strengthen the Plants, and prevent their drawing up too weak. If the Plants thrive well, they will have filled these small Pots with their Roots by the Beginning of *August*; at which time they should be shaken out of the Pots, and their Roots must be trimm'd, and then planted into Pots somewhat larger than those they before grew in, and plunged into the Hot-bed again; observing as before to give them a large Share of Air when the Weather is warm, as also to water them constantly every Day in hot Weather. In this Hot-bed the Plants may remain till about *Michaelmas*, when they should be removed into the Stove, and plunged into the Bark-bed, where during the Winter Season they should be kept warm,

and frequently refreshed with Water, because they are pretty thirsty Plants.

During the first two Years, while the Plants are young, it will be proper to continue them in the Bark-stove; but when the Plants are grown pretty large, they may be harden'd by Degrees, so as to bear the open Air abroad in the Middle of the Summer; and in Winter to live in a dry Stove. But when they are placed in a dry Stove, they will require to be often watered; otherwise they will throw off their Leaves, which will render them unsightly: for as these Plants are too tender to be planted in the open Air in *England*, so we cannot expect ever to see their Flowers and Fruit; therefore the only Beauty they have, is in their Leaves, which make a Variety in the Stove amongst other tender exotic Plants.

The Flowers of the first Kind are extremely sweet; these are produced on long Bunches, and are of a whitish green Colour. But these have not been produced in this Country, tho' there are some Plants of a pretty large Size in some curious Gardens.

The second Sort has been an old Inhabitant in the Royal Gardens at *Hampton-Court*. This may be propagated by Cuttings, which should be planted in *May*, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, which should be of a moderate Temperature for Heat; and if they are duly supplied with Water, they will take Root in two Months, and then they may be treated in the same manner as the other Plants.

CERASI similis arbuscula Mariani, pædi folio, flore albo parvo racemoso. Pluk. Mantiff. The cluster black Cherry.

This Tree is very common in *Carolina* and *Pennsylvania*, where it grows in the Woods, which are moist, in great Abundance. They usually are about the Size of a Man's Leg in their Trunks, and divide into many Branches, which are beset with Leaves shaped somewhat like those of the large Kinds of Cherries; but are of a stronger Consistence, and of a bright green Colour. The Leaves of these Trees commonly abide green all the Winter, and are thrown off in the Spring, just as the new Leaves are beginning to push out; so that they are seldom destitute of Leaves above a Month, and many times not near so long. In the Spring the Flowers are produced, which grow in long pendulous Bunches, like those of our common Bird-cherry, which have a faint sweet Scent: these are succeeded by small black Cherries, which are some of them tolerably well-tasted, but others of them are bitter. They are all greedily devoured by the Birds.

This Tree may be propagated by sowing of the Cherry-stones, which are frequently brought to *England*; but as they seldom arrive here till the Spring, so when they are sown at that Season, the Stones commonly remain in the Ground a whole Year before the Plants come up; therefore the best Method is to sow the Stones in Pots of fresh Earth, and place them where they may

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may have only the Morning Sun; and keep the Earth constantly clear from Weeds, and in very dry Weather they should be watered. In this Situation the Pots may remain till *October*, when it will be proper to plunge them either into the Ground, or an old Bed of Tanners-bark, in a warm Situation, in order to prevent the Stones from being injured by Frost; and if the Winter should prove very severe, it will be proper to cover the Pots with some Pease-haulm, or any other light Covering, to prevent the Frost from penetrating deep into the Earth. The Beginning of *February* these Pots should be taken up, provided the Weather is mild, and plunged into a moderate Hot-bed, which will bring the Plants up in a short time; and if afterward the Plants are by Degrees inured to the open Air, and carefully supplied with Water in dry Weather, they will grow eight or nine Inches high the first Year.

In *October* it will be proper to place these Pots under a Hot-bed Frame, where they may be sheltered from hard Frost, because while the Plants are very young, they will be in Danger of suffering by the Cold (tho' when they have obtained Strength, they will thrive extremely well in the open Air); but during the Winter Season, the Plants should be constantly exposed in mild Weather, and never covered but in frosty Weather. In *February* following, just before the Plants put out new Leaves, they should be shaken out of the Pots and separated, planting them in a Nursery in Rows, after the same manner as hath been directed for the common Cherry-stocks; in which Place they may remain two or three Years to get Strength, and then they may be planted where they are designed to remain. During the time the Plants remain in this Nursery, the Ground must be kept clean from Weeds; and if the Summers should prove very hot and dry, it will greatly forward the Growth of the Plants, if some rotten Neats-dung is spread on the Surface of the Ground about their Roots; for this will keep the Ground cool, and prevent the Sun and Air from penetrating to the Roots of the Plants. The Ground also should be carefully dug between these Rows of Plants, as is practised for all other Trees in the Nursery; at which time the Neats-dung may be buried, which will be of great Service to the Plants.

If they are thus managed, the Plants in two Years after planting, will be three Feet high or more; when they may be transplanted to the Places where they are designed to remain. The best time to remove them is in the Spring, just before they put out new Leaves: but as the Roots of these Trees are very full of Fibres, they must not remain long out of the Earth, because if the Air dries their Fibres, it will greatly injure them: therefore when these Trees are to be removed to a great Distance, they should be taken up carefully with Balls of Earth, and put into Baskets in the same manner as is commonly practised for most Evergreen-trees; by which Method they may be safely transported to a great Distance.

As these Trees continue green most Part of the Year, so they are very ornamental in Wil-

derness Quarters, and will grow very well under the Shade of larger Trees, provided they are planted in a moist light Soil; for in very dry Ground they will make no Progress: and if they are not supplied with Water in very hot Weather, will be in Danger of perishing in very dry Ground.

Cistus Virginiana, flore & odore periclymeni.
D. Banist. Pluk. Pbyt. The Upright Virginia Honeyfuckle.

This Plant is a Native of *Virginia* and *Carolina*, where it delights to grow in a moist rich Soil; in which Places the Stems will rise twelve or fourteen Feet high, and become as large as Walking-canes; but in dry Land they are always slender and weak, and do not produce their Flowers in Plenty. The Leaves are somewhat like those of the Pear-tree, and are placed alternately on the Branches. The Flowers are produced at the Extremity of the Shoots in Bunches, like our common Honeyfuckle, and are also shaped like them. These are white, red, or purple; for there are of all these three Varieties. The Seed-vessels are long and pointed, containing many small Seeds.

This Plant was discovered by Mr. *Banister* in *Virginia*, who gave it this Name; tho' by the Shape of the Flower and Seed-vessel, it has little Affinity to the *Cistus's*: but as it hath been long continued under this Title, I did not think proper to alter it.

In *England* this Plant is preserved in several curious Gardens, where it thrives very well in the open Air, and produces its sweet Flowers every Summer; but it should be planted in a loose moist rich Soil, otherwise it will not thrive; for in dry Land it is frequently destroyed in Summer, unless there be great Care taken to supply it with Water in dry Weather. The finest Plants which I have seen of this Kind, are at the Right Honourable the Earl of *Islay's* Gardens near *Twickenham*, which being a very low moist loose Soil, most of the Trees which are Natives of *North America*, thrive there much better than I have observed them in any other Garden in *England*; and his Lordship has as large a Collection of these Trees and Shrubs, as are to be found in any one Garden.

This Plant may be propagated by Layers, for the Seeds never ripen in this Country. The Layers should be layed down the latter End of *March*, or the Beginning of *April*; and if some rotten Neats-dung is laid on the Surface of the Ground about the Layers to keep the Ground cool, and prevent the Sun and Air from penetrating into the Earth, it will be of great Use in promoting their taking Root. In dry Weather they must be constantly supplied with Water, and the Ground must be always kept clean from Weeds; for if these are permitted to grow, they will rob them of their Nourishment, and prevent their taking Root. These Layers should remain undisturbed till the next Spring; but if the Winter should prove very severe, it will be proper to

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to lay a little Mulch round the Layers, to prevent the Frost from penetrating of the Ground, which sometimes doth great Injury to the tender Roots of these Plants. When these Layers are taken off from the old Plants, they may be planted in a Nursery, after the same manner as the black cluster Cherry before-mentioned; where they may remain for a Year or two to get Strength; and then they may be transplanted into Wilderness Quarters, where they are designed to remain.

If these Plants are planted in a proper Soil, they will thrive and produce their Flowers in great Plenty; so will make a very agreeable Variety, when intermixed with other hardy exotic Trees and Shrubs.

BAOBAB, The Ethiopian Sour Gourd.

This Tree grows plentifully on the Coast of Guinea, from whence the Fruit have been brought to England; where many of the Plants have been raised, and some of them are now preserved in the Gardens of those Persons who are curious in collecting exotic Plants.

In the Countries where this Tree naturally grows, it riseth to a very great Height, and spreads out on every Side very wide, so as to form a large regular Tree; the Leaves which are sometimes produced singly, and at other times by three's and five's, are of a bright green Colour, and about the Size of those of the Lemon-tree, but are not so thick nor strong. These Leaves usually fall away towards the Spring, when the Trees remain bare for about five or six Weeks before the new Leaves are pushed out. The Flowers of the Tree are of a whitish green Colour, which are succeeded by Fruit as large as an ordinary Melon, pointed at both Ends; having a pretty hard tough Shell, which is covered with a soft greenish Down or Cotton; and the Inside is full of hard brown Seeds, which are lodged in a brownish Pulp, which is very acid. This Pulp is much used in those extreme hot Countries, to cool and quench Thirst, and is esteemed very good in putrid or pestilential Fevers, which are very common on the African Coast.

It is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; where they must be kept very warm, and frequently refreshed with Water: when the Plants are come up, they must be treated in the same manner as hath been directed for the Fiddle-wood. In the Autumn the Plants must be removed into the Stove, and plunged into the Bark-bed, where during the Winter Season they must be kept very warm; and so long as the Plants retain their Leaves, they must be frequently refreshed with Water; but when their Leaves are fallen, they will not require so much Water: therefore it should be given to them more sparingly.

These Plants are too tender to live in the open Air in England, so they must be constantly preserved in the Stove; where in the Summer

Season, they should have a large Share of fresh Air admitted to them, by opening of the Glasses of the Stove in warm Weather; but in the Winter they must have a temperate Warmth, otherwise they will not live in this Country. There are some of these Plants in the English Gardens, which are seven or eight Feet high, and of proportionable Strength; but I have not heard that any of them has produced Flowers.

AMMANIA.

The Characters are;

The Flower consists of four Petals, which are regular, and expand in form of a Rose; each of which is succeeded by a roundish Seed-vessel, that is divided into four Cells, which are full of small Seeds.

We know but one Species of this Plant; viz.

AMMANIA *palustris*, caule quadrangulo, foliis angustis. Houst. Marsh Ammania, with a square Stalk, and narrow Leaves.

This Plant was named by the late Doctor Houstoun, in Honour to Doctor Amman, the present Professor of Botany at Petersburg; so hath no English Name. It grows in Jamaica, and several other Places in the warm Parts of America, but chiefly in moist Places where there are standing Waters. The Stalks of this Plant are very succulent, and resemble those of Purslain: these usually grow three or four Feet high, and send out several Side-branches, which are square, and are beset with Leaves, which grow opposite, and surround the Stalk; having no Pedicle or Footstalk. These Leaves are oblong, narrow and smooth; from the Base of these Leaves, the Flowers are produced in Whorles round the Stalks, which are succeeded by the Seed-vessels. This Plant perishes soon after the Seeds are ripe.

It is preserved in some curious Gardens for the sake of Variety; but as the Flowers are very small, so the only Beauty of the Plant is in its succulent Branches and Leaves. It is propagated by Seeds, which should be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a small Pot filled with rich light Earth, and plunged into a Hot-bed of Tanners-bark; where they must have free Air admitted to them in warm Weather, and should be frequently watered. When the Plants have filled these small Pots, they should be shaken out, and their Roots trimmed, and then put into Pots which are larger, and placed either into the Bark-bed in the Stove, or under a tall Frame, where the Plants may have Room to grow in Height; for they are too tender to thrive in the open Air in England: so they must constantly remain in the Bark-bed; but should have a large Share of fresh Air admitted to them in warm Weather, and constantly watered every Day; with which Management the Plants will produce ripe Seeds in September, and will soon after perish.

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BUDDLEIA.

The Characters are;

It hath a bell-shap'd Flower compos'd of one Leaf, which is divided into four Parts: from the Centre arises the Pointal, which afterward becomes an oblong Fruit, compos'd of two Cells, which are filled with small Seeds.

The Species are;

1. *BUDDLEIA frutescens, foliis conjugatis & serratis, floribus spicatis luteis.* Houst. Shrubby Buddleia, with sawed Leaves growing opposite, and yellow-spiked Flowers.

2. *BUDDLEIA frutescens, foliis oblongis mucronatis, subtus tomentosis, floribus spicatis albis.* Houst. Shrubby Buddleia, with oblong pointed Leaves, downy underneath, and white Flowers growing in Spikes.

The first of these Plants is very common in *Jamaica* and *Barbados*, where it grows in Gul-lies, and other moist uncultivated Places. It rises to the Height of eight or ten Feet, and divides into many woody Branches, which are covered with a smooth-grey Bark. The Leaves are placed by Pairs on the Branches, which are white underneath, and are sustained by very short Footstalks. At the Tops of the Branches, the Flowers are produced in Spikes, about four or five Inches in Length, which are of a yellow Colour, and are inclosed in a greenish Empalement.

The second Sort was discovered by the late Doctor *Houftoun*, at *La Vera Cruz*: this grows to a greater Height than the former, and the Leaves are much larger, and are covered with a whitish Down underneath; the Flowers of this Sort are white, and grow on longer and looser Spikes than those of the former Sort.

These are very tender Plants, so cannot be preserved in this Country, unless they are kept in a warm Stove. They are propagated by Seeds, which must be obtained as fresh as possible from the Countries of their natural Growth, and sowed in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark; observing frequently to water the Earth, in order to promote the Vegetation of the Seeds; but the Water must not be given to them in large Quantities, nor too hastily, lest thereby the Seeds should be washed out of the Ground. When the Plants are come up, they should be transplanted each in a separate small Pot filled with fresh light Earth, and then plunged into the Hot-bed again, where they must be shaded from the Sun until they have taken new Root; after which time they should have a large Share of fresh Air admitted to them when the Weather is warm, and they must be duly supplied with Water. At *Michaelmas* the Plants must be removed into the Stove, and plunged into the Bark-bed, where they may have a moderate Temperature of Warmth in Winter; and if they are frequently refreshed with Water, the Plants will retain their Leaves thro' the Winter; so will make an agreeable Variety amongst other tender exotic Plants in the Stove. But these should always remain in Shelter; for they

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are too tender to thrive in the open Air in this Country; therefore in the Summer-time the Glasses of the Stoves should be opened every Day, when the Weather is good, to admit fresh Air to the Plants; but whenever the Weather is cold, or very windy, the Glasses must be kept closely shut, to guard the Plants therefrom; otherwise they will not thrive well, nor appear beautiful.

ARBUSCULA Afra folio, aculeato ilicis, caulem amplexo rigido. Boerb. Ind. alt. Ilex-leav'd African-shrub.

This Plant is preserved in some curious Gardens for the sake of Variety, but as it is not very beautiful, so it is not greatly esteemed. It is propagated by Cuttings during any of the Summer Months, which should be planted in Pots filled with fresh light Earth, and plunged into a moderate Hot-bed, where they should be shaded from the Sun in the Heat of the Day, and duly watered until they have taken Root: then they should be inured to the open Air by Degrees, and afterward placed abroad in a sheltered Situation, where they may remain until the Middle of *October*; and then they must be removed into the Green-house, placing them where they may enjoy the free Air and Sun; for if they are too much crowded by other Plants, they seldom thrive well. During the Winter Season they must be frequently refreshed with Water, but they should not have too great a Quantity given them at each time. In cold Weather they must not be too much exposed; but when the Weather is mild, they must have a large Share of free Air. In the Summer these Plants may be removed out of the Green-house, and placed in a warm Situation, amongst other exotic Plants, where they will add to the Variety.

The Flowers of this Plant are small, and of a pale white Colour, so do not make any great Appearance: these are produced from the Wings of the Leaves, and are so closely surrounded by the Leaves, as not to be discerned at any considerable Distance from the Plants. This is Male and Female in different Plants.

CAMPECHIA, Logwood.

This Tree grows in great Plenty at *Campechy*, the Bay of *Honduras*, and in other low marshy Places in the *West Indies*, from whence the Seeds have been brought to *England*, and many of the Plants have been raised, and are now preserved in some curious Gardens. In the Countries of its natural Growth, this Tree usually is about ten Inches or a Foot diameter in the Stem, and generally shoots out many crooked irregular Branches, which are beset with sharp Thorns, in the same manner as some of the Sorts of *Acacia*; the Leaves are winged, and commonly contain three or four Pair of Lobes or Wings, each being shaped like a Heart. From the Wings of the Leaves, the Flowers are produced on short slender Spikes; which consist of five regular Leaves, and expand in form of a Rose. These Flowers are

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succeeded by oblong compressed winged Pods, which split lengthwise in the Middle, and contain one, two, and sometimes three flat kidney-shap'd Seeds,

This Plant is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, and then plunged into a Hot-bed of Tanners-bark; where if the Seeds are fresh, and the Earth is kept warm and moist, the Plants will appear in about five Weeks, when the Glasses of the Hot-bed should be raised every Day in warm Weather, to admit free Air to the Plants; which will greatly strengthen them, and prevent their drawing up too weak: they must also be constantly watered every Day in warm Weather, otherwise they will not thrive. When the Plants are two or three Inches high, they should be carefully shaken out of the Pots and separated, planting each into a small Pot filled with light rich Earth, and plunged into a fresh Hot-bed of Tanners-bark, observing to shade them from the Sun in the Heat of the Day, until they have taken new Root: then they should have a large Share of free Air admitted to them every Day in warm Weather, and must be constantly supplied with Water. During the Summer Season these Plants may remain in this Hot-bed, provided there is Room enough for the Plants to grow in Height under the Glasses; but then the Tan should be turned two or three times, to renew the Heat, whenever it is found to decline. Toward *Michaelmas*, when the Nights grow cold, the Plants should be removed into the Stove, and plunged into the Bark-bed, in the warmest Part of the Stove; and during the Winter Season they must be frequently refreshed with Water, but in very cold Weather it must not be given to them in large Quantities. With this Management the Plants will retain their Leaves all the Winter, so will make a Variety amongst other tender exotic Plants in the Stove. The first Year these Plants are raised from Seeds (if they are properly managed) they will rise to the Height of two Feet, but they seldom make any considerable Shoots afterward; so that they do not make much Progress, their greatest Growth being in lateral Branches; and these rarely shoot above four Inches in one Season, and are commonly crooked, and full of Knots. There are no Plants of this Kind in *England* which are of any considerable Size, so have not as yet produced any Flowers, but the Plants are chiefly preserved for Curiosity.

The Wood of this Tree is well known in *England*, being greatly used by the Dyers. This Wood is cut at *Campechy*, and in the Bay of *Honduras*; but of late Years there has been a good Number of the Trees raised in the Island of *Jamaica*, and there might be a great Quantity of them raised in some of the *English* Colonies, were they propagated in low marshy Places, such as are at present uncultivated, which might in time prove of great Advantage to the *English* Nation.

CARPINUS, Hornbeam.

CARPINUS Virginiana, fructu lupulino. The *Virginian* Hop-hornbeam.

There have been a great Number of Plants of this Kind lately raised in the *English* Gardens, which are very different in their Appearance from the common Hop-hornbeam; for they retain their decayed Leaves till Spring, after the same manner as our common-hornbeam doth, whereas the *European* Hop Hornbeam always casts its Leaves in the Autumn.

This is what I suppose Mr. *Banister* has mentioned by the Name of *Ulmus Virginiana, fructu lupulino*; but by the Flower and Seed it agrees exactly with our Hop-hornbeam.

This Tree is propagated by Seeds, which commonly remain in the Ground a whole Year; so they should be sown in Pots or Tubs of fresh Earth, which may be placed where they may have the Morning Sun, and must be duly watered in dry Weather, and kept always clear from Weeds. In this Situation they may remain till Autumn, when they should be removed either under a Frame, or placed on the South-side of a Wall, Pale or Hedge, where they may be sheltered from cold Winds; and in hard Frost they should be covered either with Pease-haulm, or some other light Covering, to prevent the Frost from penetrating deep into the Earth: and in the Spring, when the Plants begin to appear, they must be kept clear from Weeds; and in dry Weather, if they are duly watered, it will greatly promote their Growth. If the following Winter should prove very sharp, it will be proper to shelter these Plants, because while they are so young, they may be injured by severe Frosts; tho' when they have obtained Strength, they will resist the greatest Cold of this Climate in the open Air.

The following Spring, just before the Plants push out their Leaves, they should be carefully transplanted into a Nursery, where they may remain two Years, and then they may be removed to the Places where they are designed to remain. These never grow to be very large Trees; but as they thrive very well under Trees, so they are very proper to plant for Underwood, or in small Wilderness Quarters, where they will make a Variety.

COLLINSONIA.

The Characters are;

It hath a labiated Flower, consisting of one Leaf, which is divided into five Parts; three of the upper Parts are convex, and divided at Top into several small Parts like Threads; but the two lower are spread open, and are also divided in the same manner as the other. In the Centre of the Flower arises the Pointal, attended by two Embryo's, which afterward become globular Seeds, shut up in the Flower-cup.

This Plant received its Name in Honour to Mr. *Peter Collinson*, F. R. S. who is a great Collector of exotic Plants.

We know but one Species of this Plant; viz.

COLLINSONIA Americana, urticae foliis, floribus ex albo flavescentibus. American *Collinsonia*,

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sonia, with nettle Leaves, and Flowers of a whitish yellow Colour.

This Plant was brought from *Maryland*, which is the Country of its natural Growth. The Root is fibrous and perennial, but the Stalks die to the Root every Autumn; and new Shoots are produced the following Spring. These Stalks are square, as are those of all the verticillated Plants, to which this Plant hath a great Resemblance in Stalk, Leaves and Flowers; but having never more than two Embryo's, and sometimes but one, whereas the Verticillate Plants have four to each Flower, it is therefore removed from that Class. The Flowers are produced in loose Panicles on the Tops of the Shoots, which are of a pale yellowish Colour, having two Chives which stand out a considerable Distance from the Mouth of the Flower, on which the Summits are placed.

The Seeds of this Plant seldom ripen in *England*; so the Plant is propagated by parting of the Root. The best time for this is in *March*, just before the Plants shoot out new Stems. Some of these Plants should be planted in Pots filled with rich Earth, that they may be sheltered in Winter; but the others may be planted in the full Ground, where they will abide the Cold of our ordinary Winters very well without Shelter; but in very severe Frosts they are sometimes destroyed; for which Reason a few of the Plants should be sheltered to preserve their Species. Those Plants which are planted in the full Ground, should have a moist rich Soil, or must be constantly supplied with Water in dry Weather; otherwise they will not thrive, nor will they produce any Flowers; for they naturally grow in moist swampy Places, so that when they are planted on a dry Soil, the Stems do often decay by Midsummer, when the Season proves dry, and the Flowers do not appear. This Plant flowers in *July*, and when the Season is moist, it continues in Flower most Part of *August*.

CONOCARPUS.

The Characters are;

It hath regular Flowers, each consisting of one Leaf, which are collected into a globular Head, somewhat like the Flowers of Acacia; these Flowers are succeeded each by a single Seed, which is separated by Scales; the Fruit being composed of many Scales resembling the Cones of the Alder-tree.

The Species are;

1. CONOCARPUS. *Hort. Clif.* The Button-tree.

2. CONOCARPUS *procumbens, foliis subrotundis. Houst.* Creeping Button-tree, with roundish Leaves.

The first Sort is very common in *Jamaica*, where it grows in low marshy Places by the Sea. This rises with a regular Trunk, near thirty Feet high, and divides into several Branches: the Leaves are produced by Pairs opposite to each other on the Branches, which are near three Inches long, and about half as broad. The Flowers are produced in loose Spikes on

the Tops of the Branches; which are succeeded by small Cones, somewhat like those of the Alder-tree.

The second Sort was discovered by the late Doctor *Houstoun* at the *Havanna*: this is a low Plant, whose Branches trail on the Ground; the Leaves of this are shorter and rounder than those of the former Sort. The Flowers are produced in short Spikes at the Ends of the Branches, which are succeeded by Cones that are small. This also grows in marshy Places near the Sea.

The first Sort has been often raised from Seeds in this Country, but the Plants have not lived thro' the Winter; for they do not thrive in any Place where the Salt-water doth not flow to their Roots, so that we cannot hope to preserve them in *England*.

The second Sort was brought to *England* by Doctor *Houstoun*; but the Plants arriving here in Winter, they did not succeed, so that I have not seen this Sort growing with us; and by its growing in Salt-water, as the other, it will be very difficult to preserve; for it is very impatient of Cold.

DALEA.

The Characters are;

It hath an irregular funnel-shaped Flower, consisting of one Leaf, which is divided into five Parts at the Top: from the Centre of the Flower arises the Pointal, which afterward becomes an oval Fruit, having one Cell, which is filled with small Seeds.

We have but one Species of this Plant; viz.

DALEA *Americana annua erecta, foliis oblongis, floribus cæruleis.* Upright annual American Dalea, with oblong Leaves, and blue Flowers.

This Plant is named in Honour of Mr. *Samuel Dale*, the Author of a Book, intituled, *Pharmacologia*; so we have no *English* Name for it.

It was discovered by Mr. *Robert Millar* at *Panama*, from whence he sent the Seeds to *England*, which succeeded in several Gardens, and hath been since communicated to several other Countries.

The Seeds of this Plant must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they must be duly watered, and the Glasses of the Hot-bed should be raised every Day when the Weather is warm, to admit fresh Air to the Plants, otherwise they will draw up too weak. When the Plants are large enough to transplant, they should be planted in small Pots filled with rich Earth, and plunged into a Hot-bed of Tanners-bark, where they should be shaded from the Sun until they have taken new Root; after which time they should have fresh Air admitted to them every Day when the Weather is warm, and must be frequently watered. When the Plants have filled these Pots with their Roots, they should be shaken out of them, and their Roots trimmed, and then put into larger Pots, which

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which should also be filled with rich Earth; and should be plunged again into the Hot-bed, in order to bring the Plants to flower; when they may be harden'd by Degrees, and then removed into the Stove or a Glass-case, where they may be sheltered from Cold, but should have a large Share of free Air in warm Weather. With this Management the Plants will flower in *July*, and continue flowering till the End of *September*, and will produce good Seeds; but if they are exposed abroad, they are very subject to lose their Leaves, and appear unsightly, nor will they produce good Seeds.

When the Seed-vessels change to a brown Colour, the Seeds should be gathered, otherwise they will soon scatter; so that after they begin to ripen, the Plants should be looked over twice a Week, to take their Seeds before they are fallen.

The Flowers of this Plant are very subject to vary in their Colour: even on the same Plant there are often blue, purple, and red Flowers; and from the Seeds of the same Plant, there will be Plants arise which produce blue Flowers, others purple, and some red Flowers; but these Colours are never constant, so they are not worth observing.

ARBOR Americana, pinnatis fraxini foliis, fructu reniformi, phaseolum exprimente. Pluk. Phyt. 140. f. 3. Spanish Ash, vulgo.

This Tree is a Native of the warmer Parts of *America*, where it rises to the Height of twenty-five or thirty Feet, and divides into a great Number of Branches, upon which the Leaves are placed by Pairs, which are oblong and pointed, somewhat resembling those of the Ash-tree, from whence it had the Name of *Spanish Ash*. The Seeds grow in a flat Pod, and are shaped like those of the Kidney-bean, but are compressed, and the Pods have Wings to them.

This Tree is propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners-bark; where if the Earth is kept moist, and the Bed in a moderate Temperature of Heat, the Plants will come up in about a Month after the Seeds are sown. These Plants should have fresh Air admitted to them every Day in warm Weather, to prevent their drawing up too weak, and they must be frequently refreshed with Water. When the Plants are about two Inches high, they should be shaken out of the Pots, and carefully parted, and each planted into a separate small Pot filled with rich light Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun until they have taken new Root; after which time they should be treated in the same manner as hath been directed for *Buddleia*; and being tender Plants, should be constantly preserved in the Stove, as hath been observed for all the tender Plants, which come from the same Country.

This Tree retains its Leaves throughout the Year, so will add to the Variety of tender

exotic Plants in Winter, but it hath not produced any Flowers in this Country. In *America* there is a Gum which distils from this Tree, esteemed a good Remedy for green Wounds.

CLINOPODIUM, Field-basil.

The following Sorts have been lately brought into *England*.

1. *CLINOPODIUM pulegii angusto rigidoque folio Virginianum, flosculis in cymis. Pluk. Phyt. tab. 54. f. 2. Virginian Field-basil*, with narrow stiff penny-royal Leaves, and small Flowers growing on the Top of the Shoots, commonly called Snake-weed in *Virginia*.

2. *CLINOPODIUM fistulosum pumilum, Ind. occident. summo caule floridum. Pluk. Phyt. tab. 164. f. 4. American low-fistulous Field-basil*, with Flowers growing on the Top of the Stalks.

3. *CLINOPODIUM amaraci folio, floribus albis, Americanum. Pluk. Phyt. tab. 85. f. 2. American Field-basil*, with a Marjoram-leaf, and white Flowers.

The first and third Sorts are very common Plants in *Virginia*, *Maryland* and *Carolina*, where they grow in moist Woods, and other shady Places. These are both abiding Plants, whose Shoots die to the Root every Autumn, and there are new Shoots produced every Spring. The Leaves of the first Sort are very like those of Hart-penny-royal, but are more rigid, and the whole Plant smells very like Penny-royal. The Flowers are produced in small Heads on the Tops of the Branches, which are small and white. The third Sort hath Leaves very like those of Wild-marjoram; the Flowers of this Kind are of a pale red Colour, and are produced in Whorles, on the Tops of the Stalks. Both these Plants have been esteemed as Remedies for the Bite of Serpents, by the Inhabitants of *America*, from whence they have been called Snake-weed.

These Plants are hardy enough to live in the open Air in *England*, provided they are planted in a sheltered Situation. They may be propagated by parting of their Roots, which should be done in the Beginning of *March*, just before they put out their new Shoots. These Plants should have a fresh Soil which is light and moist, otherwise they must be duly watered in dry Weather; for as they naturally grow in moist swampy Places, so if they are planted on a dry Soil, they often die in the Summer, when the Season proves warm; or the Shoots generally decay before the Flowers appear, unless they are well supplied with Water. The Soil should also be pretty loose; for if they are planted in a very stiff Land which holds the Water in Winter, the Moisture will rot their Roots. The Seeds of these Plants are seldom perfected in this Country; so they are only propagated by parting of their Roots, or by Slips taken off in Summer; which if planted in a shady Border, and duly watered, will take Root, and make strong Plants by Autumn; when they may be removed where

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where they are designed to remain: but it will be proper to keep a Plant or two of each Kind in Pots, that they may be sheltered in Winter under a Hot-bed Frame, because in very severe Winters these Plants are destroyed where they are exposed to the Frost.

The second Sort is an annual Plant, which perishes in Autumn: this must be sown early in the Spring, on a Bed of fresh Earth in an open Situation; and when the Plants are come up, they must be thinned where they are too close together; and if they are constantly kept clear from Weeds, they will require no farther Care: in *July* the Plants will flower, and if the Autumn proves favourable, their Seeds will ripen in *September*; but when the Autumn proves cold and wet, the Plants many times decay without producing Seeds, especially if they are not sown pretty early in the Spring.

JACEA, Knapweed.

1. *JACEA Virginiana, leucos petrei folio rigido, floribus pulchre purpureis, ad nodos caulium in laxiorem spicam dispositis. Pluk. Mantiss. Virginian Knapweed*, with a stiff Gilliflower-leaf, and fine purple Flowers growing in loose Spikes from the Joints of the Stalks.

2. *JACEA altera non ramosa, tuberosa radice, foliis latioribus, flores ferens pauciores, majores, squamis hiantibus armatos, & pediculis curtis insidentibus. D. Banist. Another unbranched Virginian tuberoso-rooted Knapweed*, with broader Leaves, and larger scaly Flowers, growing thinly on short Footstalks.

Both these Sorts are Natives of *Virginia, Maryland and Carolina*, where they grow plentifully in the Woods, and make a beautiful Appearance when they are in Flower. They have large tuberoso Roots, about the Size of small Turneps, from which their Stems arise; and when the Roots are strong, they grow five or six Feet high (especially those of the first Sort). These are beset with long narrow Leaves, growing alternately from the Joints of the Stalk. The upper Part of the Stalk is furnished with fine purple Flowers, which are produced in Spikes from the Wings of the Leaves. When the Roots of the first Kind are planted in a moist rich Soil, the Branches of Flowers will be near three Feet long, and make a most beautiful Appearance. These Plants do not flower in this Country until *July*, so that unless the Autumn proves very warm, they will not produce good Seeds.

These Plants may be propagated by Seeds, which should be sown early in the Spring, on a Border of fresh rich Earth, in a warm Situation. The best Method is to sow the Seeds thinly in Drills, about six Inches asunder, covering them about half an Inch thick with light Earth; and when the Plants are come up, they must be constantly kept clear from Weeds; and in dry Weather, if they are regularly watered, it will greatly strengthen the Plants. In this Bed the Plants should remain

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till the next Spring: therefore when their green Leaves are quite decayed in Autumn, there should be some old Tan spread over the Surface of the Bed about an Inch thick, which will keep out the Frost from the Roots; but if the first Winter should prove very severe, it will be proper to lay some Pease-haulm, or any other light Covering, on the Bed, to prevent the Frost from penetrating of the Ground to the Roots, which may injure them while they are young; tho' when they have obtained Strength, they will endure the Cold extremely well in the full Ground without any Covering.

The Beginning of *March* the Roots may be carefully taken up, and transplanted where they are designed to remain, which should be in a rich Soil and a moist sheltered Situation; where if they are constantly kept clear from Weeds, and the Ground loosened carefully about the Roots twice a Year, they will thrive extremely well, and the Roots will abide many Years. The second Year after they are raised from Seeds, some of the Plants will produce Flowers; but the third Year they will flower very strong, when they will make a fine Appearance, and continue a long time in Beauty; and as there is little Trouble required in their Cultivation, so they deserve a Place in every good Garden.

FRUTEX lauri folio pendulo, fructu tricocco, semine nigro splendente. Catesb. Hist. Nat. Red-wood.

This Tree grows plentifully on the Rocks in the *Babama Islands*, where it rises to the Height of eighteen or twenty Feet, and divides into many Branches, which are beset with Leaves about the Size of those of the Bay-tree, which have pretty large whitish Veins. The Bark of the Tree is smooth, and of a russet Colour: the Wood is of a fine red Colour when it is first cut; but after it hath been exposed to the Air for some time, it changes of a paler Colour.

The Seeds of this Tree were sent to *England* by Mr. *Catesby*, from which many Plants have been raised in some curious Gardens; and there are at present several of the Plants preserved, some of which are upward of eight Feet high, but they have not produced any Flowers in this Country.

This Tree may be propagated by Seeds, which should be sown early in the Spring, in Pots filled with light rich Earth, and plunged into a Hot-bed of Tanners bark, where (if they are duly watered, and the Bed kept to a kindly Temperature of Heat) the Plants will appear in three Weeks or a Month after the Seeds are sown; when the Glasses of the Hot-bed should be raised every Day to admit free Air to the Plants, when the Weather is warm, and they should be frequently refreshed with Water. When the Plants are about two Inches high, they should be carefully transplanted each into a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun

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until they have taken new Root ; after which time, they may be treated in the same manner as hath been directed for the Fiddle-wood, with which Management they will thrive extremely well.

KATSJULA KALENGU. *Hort. Mal. tom. II. p. 81.*

The Roots of this Plant were brought from China by Mr. *Duboise*, which have succeeded very well in several Gardens, and have been propagated so as to furnish other Countries with this Plant. The Name here assigned is *Malabar*, where the Plant grows in great Plenty, and the Roots are much used in Medicine. This Plant is also very common in *Persia*, where it is called *Wanbom*; and the Root is greatly esteemed for discussing of Wind, and for hypocondriack Disorders. We have no *English* Name for this Plant at present.

It is propagated by parting of the Roots, the best time for which is in *March*, just before the new Leaves are put out; for the Leaves generally decay in Winter, and the Roots send forth new Leaves the Beginning of *April*. These Roots should be planted in small Pots, filled with fresh light rich Earth, and plunged into the Bark-bed in the Stove, where they must be kept warm; but in the Day-time, when the Sun is hot, there should be free Air admitted to the Plants by opening some of the Glasses of the Stove. During the time that the Roots are destitute of Leaves, they must be watered sparingly, because too much Moisture would then rot them; but when they have put out their Leaves, they must be frequently refreshed with Water, especially in hot Weather. These Plants must constantly remain in the Bark-stove; for if the Pots are taken out of the Tan, and placed on Shelves in the dry Stove, the Roots will be apt to shrink in the Winter, which will cause them to rot, as is also the Case of Ginger, to which these Roots have some Analogy in their Consistence and Flavour.

The Leaves of this Plant arise from the Root, having very short Footstalks, and spread near the Surface of the Ground: these Leaves are broad, roundish and concave, having several longitudinal Veins or Ribs, somewhat like those of the broad-leav'd Plantain. Between these Leaves are produced the Flowers, which arise singly from the Root, having no visible Footstalk; these are composed of one Leaf, which is divided into several irregular Parts, somewhat resembling the Flowers of some Sorts of *Satyrion*; are of a whitish Colour spotted with purple, and a yellow Bottom. These Flowers are of a short Duration, seldom continuing above twenty-four Hours before they decay, but are succeeded by new Flowers from the same Root, for a considerable time. This Plant usually flowers in *July* and *August*, but is not succeeded by any Fruit or Seed in this Country: it is preserved by some curious Persons for the sake of Variety; and as it requires but little Room in the Stove, so it deserves a

a Place in every Garden where tender exotic Plants are preserved, especially as it needs no great Care in its Cultivation, and may be propagated in Plenty.

The Root of this Plant is composed of several Tubers about the Size of Hazel-nuts, from which there are several fleshy thick Fibres produced, like to those of the Ginger-root, and every Part of the Plant is warm and aromatic.

LAURO AFFINIS *jasmini folio alato, costa media membranulis utrinque extantibus alata, ligni duritie ferro vix cedens. Sloan. Cat. Jam. p. 137.* Iron-wood.

There are Male and Female Trees of this Kind: the Male Trees produce short Spikes of amentaceous Flowers, from the Wings of the Leaves, which have a great Number of Chives, supporting small Summits, which are filled with Farina or Male Dust. The Flowers of the Female Tree I have not seen, nor are they described by any Author I have met with. The Fruit comes out from the small Branches two or three together, which are surrounded by a thin Pulp, under which is one pretty large Seed.

These Trees are pretty common in *Jamaica*, and in some other Places in *America*, where they rise about twenty Feet high or more, and divide into many Branches, which are beset towards their Extremity with winged Leaves, whose *Pinnæ* are very small, and are terminated by an odd Lobe: these are placed along the Mid-rib, which has *Appendices* or narrow Wings running the whole Length. These Leaves commonly continue green thro' the Winter; so are thrust off in the Spring, when the new Leaves come out.

This Tree is propagated by Seeds, which must be sown in Pots filled with rich Earth, and plunged into a Hot-bed of Tanners-bark, and managed in the same manner as hath been directed for the Logwood. If the Bed is in a proper Temperature of Heat, and the Seeds are fresh, the Plants will appear in about five Weeks after the Seeds are sown; and then they should have fresh Air admitted to them every Day, when the Weather is warm, to prevent their being drawn up too weak, and they must be frequently refreshed with Water. When the Plants have obtained Strength enough to bear Transplantation, they should be each placed in a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun until they have taken new Root; after which they may remain in this Bed till Autumn, when they must be removed into the Stove, and plunged into the Bark-bed, where they should be treated in the same manner as hath been directed for the Mahogany-tree; with which Management the Plants will thrive very well: but as they are naturally of slow Growth, so we can't hope to see them of any considerable Size in many Years in this Country; tho' there are some of the Plants preserved by some curious

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curious Persons in their Stoves, for the sake of Variety.

The Wood of this Tree is as close as that of the Box-tree, and is of a yellowish Colour: it is so hard as to break the Tools in working of it, and is very proper to make Cogs for Wheels, because it is not hurt by the Sun or Wind; and is so heavy as to sink in Water. It grows in Savanna's, and other low Lands, in the warmest Parts of *America*.

LAURO AFFINIS terebinthini folio alato, ligno odorato candido, flore albo. Sloan. Cat. Jam. p. 137. Lignum Rhodium, or Lignum-torum.

This Tree grows plentifully in the mountainous Parts of *Jamaica*, and in some other Places in *America*; where it rises to the Height of twenty Feet, and divides into many Branches, which are armed with many short Prickles, and incline towards the Earth. The Leaves are winged like those of the Ash-trees, but the Lobes or *Pinnae* are obtuse and pretty broad, each containing two or three Pair of Lobes, without an odd one to terminate them. The Flowers are produced in Bunches at the Extremity of the Branches, which are white, and resemble those of the Elder-tree: these are succeeded by small roundish Berries, in which are included black Seeds. The Wood of this Tree is white, solid and odoriferous; from whence some of the Inhabitants of *America* have supposed it to be the Lignum Rhodium, tho' that is a very different Wood.

This Tree may be propagated by Seeds in the same manner as the former Sort, and being a very tender Plant, must be constantly preserved in the Stove, and treated in the same manner as the former, and the Mahogany-tree, all of them requiring the same Culture. This Plant is preserved in the Gardens of some curious Botanists, but hath not produced any Flowers in this Country.

MORUS fructu viridi, ligno sulphureo tincto-rio. Sloan. Cat. Jam. p. 128. Fustic-wood.

This Tree grows in the Island of *Jamaica*, and in several other Places in the warm Parts of *America*, from whence the Wood is brought to *England* for the Dyers, who use it in dying of Yellows and Reds, and is a very good Commodity.

It grows to be a very large Tree in *America*, rising to be sixty Feet high or upward, having a strait Trunk, and divides toward the Top into many Branches, which are beset with rough green Leaves somewhat resembling those of the Mulberry-tree, but smaller. The Bark of the Tree is of a light brown Colour, having several longitudinal Furrows. The Wood is solid, and of a fine yellow Colour. This Tree produces Katkins at remote Distances from the Fruit on the same Tree, as doth the Mulberry-tree: the Fruit is round, and about the Size of Nutmegs, having many *Acini*, in like manner as the Strawberry; but is green within and without.

There have been some of these Plants raised in the *English* Gardens, where some of the Plants are preserved by those Persons who are curious in collecting rare Plants. They are propagated by Seeds, which should be sown early in the Spring, in Pots filled with rich light Earth, and plunged into a Hot-bed of Tan-ners-bark; and when the Plants are come up, they must be each transplanted into a separate small Pot, filled with light rich Earth, and then plunged into the Hot-bed again, observing to shade them from the Sun until they have taken new Root; after which time they must be treated in the same manner as the Redwood, and other tender exotic Trees; but as these naturally grow in very moist Places, so they must be frequently watered; and if they are kept constantly in the Bark-stove, where they may enjoy a good Share of Warmth in Winter, and in the Summer Season have a large Share of free Air admitted to them, they will make great Progress, and retain their Leaves most Part of the Year.

LAURUS TINUS Virginiana, floribus albidis eleganter bullatis. D. Banist. Pluk. Phyt. tab. 305. f. 2. Ivy-flowering Winter-green.

This Shrub is pretty common in the Woods of *Virginia*, *Maryland* and *New England*, where it usually rises about four or five Feet high, and divides into many Branches, which are furnished with Leaves somewhat like those of the *Laurus tinus*, but are more pointed; these grow by Pairs, opposite to each other. At the Extremity of the Branches the Flowers are produced in Bunches, which are white, and shaped like those of the *Arbutus* or Strawberry-tree, which are succeeded by roundish Seed-vessels, including several small Seeds.

It may be propagated by laying down of the Branches, in the same manner as is practised for the *Laurus tinus*, which should be constantly watered in dry Weather, and some Neats-dung laid on the Surface of the Ground about the Layers, to prevent the Air and Sun from penetrating of the Earth to dry it, which would retard their making Roots. If these Directions are carefully practised, the Layers will be rooted enough to transplant in one Year; and as the best time for laying down the Branches is in *March*, so by the following *March* they will be sufficiently rooted; which is a very proper Season for removing them, provided the Spring is mild, otherwise it is better to defer it until the Beginning of *April*. When these Layers are taken off from the old Plants, they should not remain long out of the Ground; for if the Sun and Wind should dry the tender Fibres of their Roots, it will greatly injure them. The Ground in which these are planted, should be fresh, and rather moist than dry: it should also be well trenched and clean'd from bad Weeds; and if some rotten Neats-dung is buried in it, the Ground will be cooler, and the Plants will thrive much better. These Layers may be placed in Rows about three Feet Distance, and

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and in the Rows about a Foot asunder, after the same manner as is practised for other Shrubs in the Nursery, and some Mulch laid on the Surface of the Ground about their Roots, to prevent the Sun and Air from penetrating to dry their tender Fibres; and if the Spring should prove very dry, it will be proper to water them three or four times until they have taken good Root; after which time they will require no farther Care, but to keep the Ground constantly clean from Weeds during the Summer Season; and in Winter, if the Frost should be severe, it will be proper to lay some Mulch on the Surface of the Ground, to prevent the Frost from penetrating deep into the Earth, which often destroys the Plants while they are young: for altho' the Winters are generally more severe in *North America*, where these Plants naturally grow, than in *England*; yet as they are Natives of the Woods, so they are greatly sheltered from the sharp Air by the taller Trees; and the great Quantity of Leaves which in Autumn fall from those Trees, prevents the Frost from entering very deep in the Ground, and thereby these Plants are protected: for it is remarkable, that whenever these Plants are taken out of the Woods, and planted in Gardens, in any of the Settlements which are clear'd from Timber, they are frequently destroyed in Winter, tho' before they grew spontaneously on the same Spot. This may be also observed in several Plants, which grow naturally in the Woods in diverse Parts of *England*; which, if transplanted into Gardens, seldom thrive, and never continue very long; altho' the Soil into which they are removed, is nearly the same as that from whence they were taken, and they are placed on a North Border in a shady Situation; which is a Proof of their requiring the Shelter of tall Trees.

Tho' this Shrub is more speedily propagated by Layers than in any other manner, yet may it also be propagated by Seeds; but these must be procured as fresh as possible from the Countries of its natural Growth, because it doth not perfect Seeds in *England*. These should be sow'd in Pots or Tubs filled with fresh loamy Earth, and placed where they may have only the Morning Sun, observing constantly to water them in dry Weather, as also to keep the Tubs clear from Weeds; for these Seeds commonly remain in the Ground a whole Year, before the Plants come up, when they are sown in the Spring, which must be constantly the Season in this Country; because if the Seeds are sent over soon after they are ripe, they cannot be expected to arrive here before *Christmas* at the soonest, and many times it will be much later; so that during the first Summer, there will be no other Care required but to keep the Earth constantly clean from Weeds, and in very dry Weather to water it: but in Winter it will be proper to place these Pots or Tubs under a common Hot-bed Frame, where they may be sheltered from severe Frosts; or where this Conveniency is wanting, they should be plunged into the Earth under a warm Wall;

and in hard Frosts they may be covered with Pease-haulm, or some such light airy Covering, to prevent the Frost from penetrating deep into the Earth, which might injure the Seeds. About the Middle or latter End of *February*, these should be removed, and placed on a moderate Hot-bed, which will bring up the Plants in a short time; but when the Plants appear, they must have a large Share of fresh Air admitted to them every Day in mild Weather; and as the Season advances, so they should by Degrees be inured to bear the open Air; and toward the latter End of *May*, they must be taken out of the Hot-bed, and placed in a sheltered Situation, where they may have the Morning Sun till about Ten o'Clock, but may be screened from the Sun in the Heat of the Day. In dry Weather these Plants will require to be frequently watered, and they must be constantly kept clear from Weeds; with this Management the Plants will make good Progress the first Season: but in *October*, when the Nights begin to be frosty, they must be removed into Shelter; for as these, and many other *American* Trees and Shrubs, are very subject to shoot freely in the Autumn, so whenever there happen some early Frosts, which are sharp, the Shoots being very tender are often killed by them, so that the leading Shoots of the Plants are destroyed, or so much injured, as to decay at their Tops; whereby the Stems become crooked, and oftentimes the Trees receive such a Check hereby, as not to recover it in several Years after.

The second Spring these Seedling-plants will be fit to transplant, when they should be carefully shaken out of the Pots in which they were sown, and carefully parted, planting each into a separate small Pot, filled with fresh rich loamy Earth, and if they are plunged into a moderate Hot-bed of Tanners-bark, it will cause them to take Root very soon, and greatly promote their Growth; but so soon as they have taken Root, they must have a large Share of free Air admitted to them every Day, and by Degrees they must be exposed to the open Air, into which they should be removed in *May*, and placed in a sheltered Situation, exposed only to the Morning Sun; but as these small Pots will dry very fast in hot Weather, so if they are plunged into some old rotten Tanners-bark, or rotten Dung, it will prevent the Sun and Air from drying the Earth, and be of great Use to the Plants. In this Situation the Plants may remain the Summer Season, during which time they must be frequently watered in dry Weather, and kept clear from Weeds; but in the Autumn they should be removed into Shelter, as in the former Winter, either by placing them under a Hot-bed Frame, or arching of them over with Hoops, so as that they may be covered with Mats in frosty Weather; but in mild Weather they should be exposed to the Air as much as possible, otherwise they will cast their Leaves, and lose their upper Eyes.

Toward the Middle or latter End of the following *March*, the Plants should be shaken out

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out of the Pots, and planted where they are designed to remain, which should be in a well-sheltered Situation, and a moist rich Soil; observing, when they are planted, to lay some Mulch on the Surface of the Ground about their Roots, as also to water them, if the Season should prove dry, until they have taken good Root; after which time they will require no farther Care, but to keep them clear from Weeds, which if permitted to grow amongst the Plants, would soon overspread and destroy them. As these Plants continue green throughout the Year, and produce many Bunches of white Flowers at the Extremity of their Branches, which make a fine Appearance for six Weeks; so they merit a Place in good Gardens, especially as they will grow under Shade; where they will afford an agreeable Variety, when mixed with other evergreen Shrubs of the same Growth.

LOTO AFFINIS coryli folio singulari. Dodart.
Mem. Birdsfoot-trefoil with a single Hazel-leaf.

This is an annual Plant, which usually grows two Feet and a half high, having some small Side-branches. The Leaves grow alternately at a large Distance from each other, which are shap'd like those of the round-leav'd Alder-tree, having many deep longitudinal Furrows in them. The Flowers are produced on long Footstalks, coming out from the Wings of the Leaves. These are collected into a roundish Head, and are of a purplish Colour, shaped somewhat like those of Ladies-finger, and are succeeded by round brownish Seeds.

The Seeds of this Plant must be sown early in the Spring on a moderate Hot-bed, and when the Plants appear, they must be kept clear from Weeds, and frequently watered. In warm Weather the Glasses of the Hot-bed must be raised every Day, to admit fresh Air to the Plants, otherwise they will draw up too weak. When the Plants are about two Inches high, they should be carefully taken up, and each planted into a separate small Pot filled with rich fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to shade them from the Sun until they have taken new Root; after which time they must be frequently watered in hot Weather, and the Glasses should be raised every Day to admit fresh Air to the Plants; in this Bed they may remain until the Plants have filled the Pots with their Roots; and then they should be shaken out, and after their Roots are trimmed, they must be put into larger Pots, filled with fresh rich Earth, and then plunged into the Bark-bed in the Stove, where they may have room to grow in Height; and in *July* the Plants will flower, but their Seeds will not ripen till *September*; so that if the Plants are exposed constantly to the open Air, they rarely produce good Seeds in *England*.

LUPULUS sylvestris Americana, claviculis donata. Pluk. *Phyt. tab.* 201. f. 4. Wild Hop-feed.
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This Plant is a Native of the warm Parts of *America*, where it rises with two or three slender Shoots, which trail on whatever Trees or Shrubs they grow near, and fasten themselves to the Branches of Trees by their Tendrils, which are produced on the Sides of the Branches in the same manner as are those of the Vine. The Leaves are oblong, rough, and terminate in a long Point. Toward the upper Part of the Shoots, the Flowers are produced, which are succeeded by Seed-vessels growing together in a Head, somewhat like those of Hops, from whence the Inhabitants of *America* gave it the Name of Hop-feed.

This Plant is preserved in several curious Gardens in *Europe*, for the sake of Variety, there being little Beauty or Use (at present known) in this Plant. It is propagated by Seeds, which must be sown on a Hot bed early in the Spring; and when the Plants are strong enough to transplant, they should be each planted into a separate small Pot filled with rich light Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root; after which time they must be treated in the same manner as hath been directed for the former Plant, during the Summer Season; and in Winter they should be plunged into the Bark-bed in the Stove, where they may enjoy a moderate Heat, and they must be frequently watered; for they naturally grow on moist Ground, so are pretty thirsty Plants; but in very cold Weather, they should not have too great Quantities of Water given to them each time, lest it should kill their tender Fibres. If this be duly observed, the Plants will retain their Leaves thro' the Winter, and the following Spring they will make great Progress in their Growth; but they seldom produce Flowers in this Country until the third Summer, when, if the Plants have thriven kindly, they will be fourteen or sixteen Feet high: but as their Branches are very slender, so they must be supported, otherwise they will trail over whatever Plants are placed near them; therefore these should be placed at the Back-side of the Stove, to run over the Trelase with other climbing Plants, where they will afford Variety.

PHYLLANTHOS Americana planta, flores & singulis foliorum crenis proferens. Par. Bat. prod.
American Phyllanthos, with Flowers growing on the Edges of the Leaves.

These Plants are Natives of the warm Parts of *America*, where they grow on Rocks, so that it is very difficult to transplant them; for their Roots shoot very deep into the Fissures of the Rocks, by which the Plants are chiefly supported. They rise with a slender Stem to the Height of eight or ten Feet, having a smooth grey Bark, something like that of the Fir-tree; at the Top come out the Leaves in an irregular Order, which are winged like those of the Spleenwort; and on the Edges of the Lobes the Flowers are produced on short Footstalks, which at first appear like the Seeding-part of the Ferns, being of a brown or russet

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Colour: these are succeeded by small Seed-vessels, which are filled with very small Seeds.

It is preserved in some curious Gardens for Variety, and by its odd Appearance doth merit a Place in such Gardens where tender exotic Plants are preserved. At present this Plant is very rare in *England*; for as the Seeds of this Plant do not succeed when brought over, so there is no other Method to obtain the Plants, but to dig those which are young out of the Rocks, in the Places where they naturally grow, and to plant them in small Tubs of Earth; by which Method they may be brought over to *England*; and when they arrive, they should be placed in a warm Stove, otherwise they will not live thro' the Winter in this Country.

This Plant doth not produce many Side-branches, so that it cannot be easily propagated by Layers or Cuttings, which is the Reason of its being so very uncommon in *Europe*; for I do not remember to have seen more than two of the Plants, one of which was in the Physic-garden at *Amsterdam*, which was originally brought from *Porto Rico*, an Island in *America*, now possessed by the *Spaniards*. It is very impatient of Cold, so must be constantly kept in the Stove in this Country; and in Summer, when the Weather is warm, there should be a large Share of free Air admitted, by opening of the Glasses of the Stove every Day; but in the Night they should be closely shut, except in very warm Weather; and in Winter the Stove in which these Plants are placed, must be kept to the temperate Heat mark'd on Mr. *Fowler's* Thermometers. During the Winter Season these Plants must not have too much Water, but they should have a pretty large Share of Moisture in hot Weather; which will cause them to flourish, and produce large beautiful Leaves, when they afford an agreeable Variety amongst other tender exotic Plants in the Stove.

PRUNIFERA, vel nucifera, seu nuci-prunifera arbor Americana praeclsa, angustis laurinis foliis late virentibus, mastichen odoratum fundens. Pluk. Phyt. tab. 217. The Mastich-tree of Barbados.

This Tree grows in *Barbados*, *Jamaica*, and several other Places in the warmest Parts of *America*; where it rises to the Height of fifty or sixty Feet, and divides into many Branches. From the Trunk and Branches of this Tree, there flows out a Balsam, which smells very like Mastich, from whence it had this Name. The Leaves are pretty long, narrow, and ending in a Point, and are of the Consistence of those of the Bay-tree, of a shining green Colour, and continue throughout the Year; which renders it worthy of a Place in such Stoves where tender exotic Plants are preserved, notwithstanding they do not produce either Flowers or Fruit in this Country. The Timber of this Tree is frequently used in *America*, to make Tables and other Utensils, for which Purpose it is pretty much esteemed.

This Tree is propagated by Seeds, which should be procured as fresh as possible from the

Countries of its natural Growth (for if they are kept very long out of the Earth, they rarely grow): these must be sown early in the Spring, in Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark, where if the Bed is kept in a proper Temperature of Heat, and the Earth is frequently watered, the Plants will appear above Ground in about six Weeks or two Months; when the Glasses of the Hot-bed should be raised a little every Day to admit fresh Air to the Plants, to prevent their drawing up too weak, and they must be frequently refreshed with Water. When the Plants are about two Inches high, they should be carefully transplanted each into a separate small Pot filled with fresh Earth, and then plunged into a moderate Hot-bed of Tanners-bark, observing to water and shade them until they have taken new Root; after which time they should have fresh Air admitted to them every Day, in Proportion to the Warmth of the Season, and must be frequently refreshed with Water. In this Hot-bed the Plants may remain during the Summer Season, but at *Michaelmas* they should be removed into the Stove, and plunged into the Bark-bed; where if they are kept in a moderate Temperature of Heat, and are frequently refreshed with Water, their Leaves will continue of a fine Verdure all the Winter, and the Plants will make good Progress; but if they are exposed to the Cold, they will be soon destroyed.

As these Plants are tender, so they should constantly remain in the Stove, observing in the Summer Season to admit a large Share of free Air to them; and if their Leaves contract any Filth, they should be carefully washed with a Sponge to clear it off; otherwise it will retard the Growth of the Plants, and render them unsightly. In Winter they must have a moderate Heat, and frequently must be refreshed with Water; but in cold Weather it must not be given to them in large Quantities, lest it should rot the tender Fibres of their Roots. As the Plants advance in their Growth, so they should be removed into larger Pots, that their Roots may have Room to expand; but the Pots should not be too large, for that is a greater Fault than being too small; nor will these Plants require shifting oftener than once every Year, which should be toward the latter End of *March*, just before they begin to put out new Shoots, when their Roots must be carefully trimm'd, and the Pots filled with fresh rich Earth; and if at this Time the Bark-bed is turned, and renewed with some fresh Tan, it will cause the Plants to put out new Roots very soon, and greatly promote their Growth.

PYRETHRUM flore bellidis. C. B. P. Pellitory of Spain.

The Root of this Plant is very acrid, so is frequently recommended to be chewed in order to draw cold Rheum from the Gums, when Persons are troubled with Pains in their Jaws, for which it is greatly esteemed, and is placed in the Catalogue of medicinal Plants. It grows in

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in *Spain, Italy, and the South of France*, from whence the dried Roots are imported into *England*.

At present this Plant is not common in the *English Gardens*, tho' it deserves a Place in the Pleasure-garden as an Ornament, and being an useful Plant, should render it more valuable. The Roots of this Plant run down pretty deep into the Ground, after the manner of Carrots and Parsnips, and are usually as large as a middling Carrot: the Leaves of the Plant are cut very fine, resembling those of Chamomile, and are of a Sea-green Colour; the Flowers are produced on the Top of the Stalks, which are as large as those of the common Marygold, having a large yellow Middle, bordered round with Leaves like the Flowers of Daisies, being white on the Inside, and of a fine purple Colour on the Outside, so that they make a beautiful Appearance; and when the Plants are strong, the Flowers succeed each other, from the Middle of *February* (if the Season is mild) until *May*, during which time the Roots are rarely destitute of them; and frequently there are many Flowers open at the same time upon them, which if supported by Sticks, to prevent their trailing on the Ground, will make a fine Appearance. By the Flowers and Seeds of this Plant, it should be ranged amongst the Chamomiles; but it is not described by any of the late Writers on Botany.

This Plant is propagated by Seeds, which should be sown on a Bed of fresh Earth in *March*; and as the Seeds are very light, so it will be the best Method to sow it in Drills about eighteen Inches asunder, covering them over about half an Inch with Earth; and when the Plants are come up, they should be kept clear from Weeds; and if they are too close together, some of them may be drawn out, and pricked into a shady Border, to give Room for the remaining Plants to grow; for they should be left about four or five Inches asunder in the Rows, which will be sufficient for them until *Michaelmas*, when they may be thinned for good, leaving them about a Foot Distance, where they are designed to grow in a Bed by themselves: and the Plants which are taken out, may be transplanted into the Borders of the Pleasure-garden, where if the Soil is dry, and the Situation warm, they will thrive extremely well without any Covering in Winter. In transplanting of these Plants, there must be great Care taken not to break or cut their Tap Roots, which would greatly injure them. Some few of these Plants may be put into Pots while they are young, which may be sheltered under a common Frame in Winter, for fear those which are exposed abroad should be destroyed: tho' this can only happen in a very severe Frost; for in our ordinary Winters, they thrive as well in the full Ground, as if they were in their native Country, and frequently flower about *Christmas* in mild Winters.

The Seedling-plants will flower the following Spring, and produce good Seeds in Plenty, provided the first Flowers are not gathered;

but the Roots will abide many Years, and flower in greater Plenty as they grow stronger, and will require no other Culture but only to dig the Ground gently between the Roots every Spring, being very careful not to bruise or injure them, and to keep the Ground constantly clear from Weeds.

PRENANTHES, Rattle-snake-weed.

The Species are;

1. *PRENANTHES Canadensis altissima, foliis variis, flore luteolo. D. Sarrazin. Vaill. Mem.* The tallest *Canady* Rattle-snake-weed, with variable Leaves, and a yellowish Flower.

2. *PRENANTHES Canadensis elatior, foliis imis variis, superioribus angustis & mucronatis, flore luteolo. D. Sarrazin. Vaill. Mem.* Taller *Canady* Rattle-snake-weed, with the lower Leaves variable, and the upper Leaves narrow and pointed, and a yellowish Flower.

3. *PRENANTHES Nov' anglicanus, chenopodii foliis, floribus candidis. Vaill. Mem.* *New England* Rattle-snake-weed, with Goose-foot Leaves, and white Flowers.

These Plants are very common in the Woods, and other shady Places in most of the Northern Parts of *America*, but particularly in *Virginia* and *Maryland*, where the Inhabitants have an Opinion that they will cure the Bite of the Rattle-snake, if timely applied to the wounded Part: from whence the Name of Rattle-snake-weed has been given to them.

The Seeds of the two Sorts first-mentioned have been brought to *England*, where the Plants are preserved in the Gardens of some curious Persons, for the sake of Variety. These Plants seldom abide longer than two Years; but as they perfect their Seeds very well in this Country, so new Plants may be raised every Year for a Supply. The Seeds of these Plants should be sown in Autumn, soon after they are ripe; for if they are kept out of the Ground until Spring, they seldom grow the same Year, so that the Plants do not come up until the Spring following. The best Method is to sow the Seeds in Drills, in a Bed of fresh Earth, making the Drills about two Feet asunder, and cover the Seeds about half an Inch with Earth. When the Plants are come up, they must be kept clear from Weeds; and in the Spring the Plants should be thinned, so as to leave them about six or eight Inches distant in the Rows; and if the Weeds are constantly cleared from them, they will require no farther Culture. In *July* the Plants will flower, and they will ripen their Seeds by the Middle or latter End of *August*.

These Plants have some Resemblance to the Sowthistle, and the Stems and Leaves abound with a milky Juice in like manner; so that there is no Beauty in them, but they are preserved in Botanic Gardens for Variety.

PSEUDO-SANTALUM croceum. Sloan. Cat. p. 213. Brasiletto Wood.

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The Wood of this Tree is brought from the *West Indies* for the Dyers, who use it in Dying of Yellows and other Colours, and has formerly been a valuable Commodity, but at present it is not so much in Use.

This Tree grows plentifully on the North Side of the Island of *Jamaica*, and in several other Parts of *America*; where it usually rises about thirty Feet in Height, and divides into many crooked irregular Branches, which are furnished with winged Leaves, whose Ribs and Footstalks are beset with crooked Spines, which fasten to the Cloaths of such Persons who pass between them, in the same manner as the Bramble.

In *England* there are some of these Plants preserved as Curiosities, in some curious Botanic Gardens; but as they are Natives of warm Countries, so they cannot be maintained here without the Assistance of Stoves; for they are too tender to live in the open Air, in the warmest Part of the Year. These are propagated by Seeds, which should be sown early in the Spring, in small Pots filled with fresh light Earth, and plunged into a Hot-bed of Tanners-bark; where if the Bed is kept in a proper Temperature of Heat, and the Earth frequently watered, the Plants will appear in a Month after the Seeds are sown; when they should be treated in the same manner as hath been directed for the Logwood, except that they must not be watered so often, because these Trees naturally grow on drier Ground.

If these Plants are properly managed, they will grow near a Foot in Height the first Summer; but afterward they make but a small Progress, seldom shooting above three or four Inches in a Year, and commonly put out many lateral Branches, which stop their growing in Height. They retain their Leaves throughout the Year, when they are kept in a proper Temperature of Heat; but if the Stove is too cold, they will cast their Leaves, and oftentimes will lose the tender Parts of their Shoots in Winter.

Rhus obsoniorum similis Americana, gummi candidum fundens, non serrata foliorum rachi medio alata. Pluk. Phyt. tab. 56. f. 1. The Gum Copal-tree, *vulgò*.

This Plant grows in *Virginia* and *Carolina*, where it rises to the Height of twenty Feet or upwards, and divides into many Branches, which are furnished with winged Leaves, each having four, five, or six Pair of Lobes, and terminated by an odd one; these are placed on a winged Midrib, having no Footstalks. There is a white Gum issues out of the Tree, which is by many taken for the Copal, and is used in Medicine.

There are some of these Plants in the *English* Gardens, which have grown in the full Ground for some Years, without receiving any Injury from the Frost, so that they may be safely planted in the open Air, as they have endured the Cold of our ordinary Winters for some Years past, when the Plants were but young;

and if a severe Frost should happen, a slight Shelter will be sufficient to protect them, especially when the Plants have obtained Strength, provided they are placed near the Shelter of other Trees; for when these *American* Trees grow in Thickets, they defend each other, so are not subject to be destroyed in a hard Winter.

This Plant may be propagated by Seeds, which should be sown in Pots or Tubs of Earth, which should be placed in a sheltered Situation, where they may have the Morning Sun, and in dry Weather frequently refreshed with Water: in this Place they may remain the Summer Season, observing to keep them clear from Weeds; for the Plants seldom come up the first Year: therefore at *Michaelmas* the Pots should be removed, and placed under a Hot-bed Frame, where they may be screened from hard Frosts, but should be exposed in mild Weather. The following *February*, the Pots should be plunged into a very moderate Hot-bed, which will bring up the Plants in a short time; but the Beginning of *April*, they should by Degrees be inured to the open Air; and in the Middle of *May*, they may be taken out of the Hot-bed, and placed in a sheltered Situation, where they should remain during the Summer Season, being careful to supply them with Water in dry Weather, otherwise the Plants will not make much Progress. At *Michaelmas*, the Plants should be removed into Shelter, under a Hot-bed Frame, where in mild Weather they should be constantly exposed to the open Air; but in cold Weather, they may be screened with Glasses, and covered with Mats in very hard Weather, to prevent the Frost from penetrating to the Roots of the Plants, which would destroy them while they are very young.

The following Spring, just before the Plants begin to shoot, they should be carefully taken up, and each transplanted into a separate small Pot filled with fresh Earth, and then plunged into a moderate Hot-bed, which will promote their taking new Root; and as the Spring advances, and the Weather is mild, they must be inured to bear the open Air by Degrees; and in *May* they should be quite exposed to the Air, in a warm sheltered Situation, exposed to the Morning Sun; but as the Pots are small in which the Plants are placed, so if they are plunged into old Dung, or Tanners-bark, it will prevent the Sun and Air from drying the Earth too fast, and thereby be of great Service to the Plants, which will require to be frequently watered in dry Weather; for they naturally grow on moist Land.

In Winter these Plants will require to be protected from hard Frost; so they may be either placed under a Hot-bed Frame as in the former Year, or else plunged into an old Hot-bed of Tanners-bark, in a warm Situation, and arched over with Hoops, that they may be covered with Mats and Pease-haulm in hard Frost; but should be exposed in mild Weather. And in the latter End of *March*, most of the Plants

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Plants may be turned out of the Pots, and planted into the full Ground where they are designed to remain; and the Surface of the Earth should be covered with rotten Tanners-bark, or old rotten Dung, to prevent the Sun and Air from penetrating the Ground; and if the Spring should prove very dry, they should be watered twice a Week, which will cause them to make good Roots, and greatly forward their Growth. During the Summer Season the Plants should be constantly kept clear from Weeds, which if permitted to grow amongst them, would soon overbear and destroy them while they are young; but when the Plants are strong, they will not be in much Danger of suffering from any ordinary Weeds, if the Ground is kept clear from Couchgrafs and such troublesome Weeds; whose Roots will interfere with those of the Plants, and rob them of their Nourishment. In the following Autumn, it will be proper to renew the Mulch about the Roots of the Plants, to prevent the Frost from penetrating of the Ground to their Roots; and if the first Winter should prove very severe, it will be proper to shelter the Plants with some Oak boughs, whose Leaves remain on them, which if stuck into the Ground about the Plants, will greatly protect them: but as the Plants grow in Strength, so they will resist the Cold very well without any Care. Such of the Plants as were not planted into the full Ground, should be removed into larger Pots, and removed into Shelter in Winter; but in Summer they must be placed abroad as before. The Reason of my advising some Plants to be kept in Pots is, lest those abroad should suffer by a very sharp Winter; but when those are well established in the Ground, and out of Danger, these may also be shaken out of the Pots, and planted in the full Ground.

These Plants may also be propagated by laying down of the tender Branches in the Spring, which if duly watered in dry Weather, will take Root, and may be taken off from the old Plants, and transplanted the following Spring, where they are designed to remain, and should be treated in the same Way as the Seedling-plants. As these Plants will live in the open Air, so they are worthy of a Place in large Gardens, where being intermixed with other hardy Trees and Shrubs, they will make an agreeable Variety.

RICOPHORA, Yams.

The Species are;

1. *RICOPHORA Indica seu Inbame rubra, caule alato, scammonii foliis nervosis conjugatis.* Par. Bat. prod. The red-stalk'd Yam.

2. *RICOPHORA magna Virginiana, bryonia nigra modo volubilis, singulari folio nervoso flexili, caule tetragono, ad angulos elato.* Pluk. Almag. The great Virginia Yam, with a square Stalk climbing like Black-bryony, and a single-ribb'd Leaf.

There are some other Varieties of this Plant in the warm Parts of the East and West Indies; but these two are the most commonly culti-

vated for Use. These Plants are wild in the Woods in Zeylon, and are reckoned as good as those which are cultivated; but as they are difficult to dig up, and grow scattering at a great Distance from each other, so the Inhabitants of that Island plant them in open Fields for Food. These are also cultivated by the Inhabitants of Jamaica, and the other Islands in America, and are esteemed a very wholesome Food. The Manner of propagating them is the same as for Potatoes, which is to divide the Roots into several Pieces, preserving a Bud or Eye to each, and planting them in Drills, at about a Foot Distance in the Rows, and two Feet asunder Row from Row. These Drills should be made a Foot deep; and after the Pieces of Roots are laid therein, must be covered over with the Earth which came out of the Drills. After this they require no farther Care but to keep the Ground clear from Weeds, until the Shoots are grown strong, when they will over-top the Weeds, and prevent their growing. In about ten Months after the planting, the Roots will be fully grown for Use; when they will some of them weigh five or six Pounds per Root or more; when they are taken out of the Ground, they must be laid up in dry Sand to preserve them for Use; but the Sand must be kept very dry, otherwise the Roots will grow, and oftentimes they will rot with much Moisture. With these Roots the Planters feed their Negroes instead of Bread: and they grind the Roots to a Powder, and make Puddings of it, in the same manner as Wheat-flour is used in England: but the Roots must be well soaked in Water before they are used, to draw out the sharp biting Taste, which they have when taken out of the Ground.

These Plants are preserved in some curious Gardens in Europe for Variety; but as there is little Beauty in them, so they are hardly worthy of a Place; for they must be kept in a warm Stove, and plunged into the Tanners-bark, otherwise they will not thrive in this Country. The Shoots of these Plants will rise to the Height of ten or twelve Feet, and twine about the Plants which are near them; so that where these are preserved, they should be placed near a Trelase on the Back-side of the Bark-bed; and as the Shoots are produced, they should be trained up to the Poles of the Trelase to support them, that they may not ramble over other Plants, and destroy them. The Shoots of these Plants die to the Root in Winter, after which time they should not have much Water given to them, lest it should rot them: but during the Summer Season they must be plentifully watered in hot Weather. These Roots must be taken up in March, before they begin to shoot, and new-potted; and at the same time it will be proper to cut off the old decayed Parts of the Roots, preserving only the fresh Parts which have good Eyes for planting; for if the Roots are planted again whole as they were taken up, the old Part is very apt to decay, and that frequently infects the other Parts, so that the whole often perishes,

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rishes, which may be prevented by the cutting them off; but these Pieces of Roots should be laid by in a dry Part of the Stove for eight or ten Days, that the wounded Parts of the Roots may heal before they are planted, otherwise they are in Danger of rotting; nor should they have much Moisture until they have put out Shoots, for the same Reason. The Tan-bed in which these are plunged, should be stirr'd up, and fresh Tan added to it to renew the Heat, which will cause them to take Root in a short time.

TACAMAHACA foliis crenatis, fadelbout seu lignum ad ephippia conficienda aptum. Par. Bat. prod. Pluk. Phyt. tab. 228. f. 2. The Tacamahaca.

This Tree grows spontaneously on the Continent of *America*, where the Inhabitants wound the Bodies of the Trees in the Spring, from whence there flows a Balsam, which is greatly esteemed by the Physicians of those Countries, and is placed amongst the List of Simples in the College Dispensary, tho' at present it is not much used in *England*.

Some of the Plants of this Tree were brought from *Canady* into *France* a few Years since, from whence they were procured by some curious Persons in the Island of *Jersey*, where it is propagated in their Gardens, and was sent to *England* by the Name of *Arbre de la Reine*, as a Present to the late Queen.

This Tree is hardy enough to resist the Cold of our ordinary Winters in the open Air; and if it is planted in a sheltered Situation, I believe will not be in any Danger of suffering from the severest Cold of this Country, especially when the Plants have obtained Strength; so is very proper to plant amongst hardy exotic Trees and Shrubs in Wilderiness Quarters, where they will add to the Variety. The Shoots of this Tree are very like those of the Black-poplar, as are also the Leaves; and the Buds, in the Spring, before the Leaves come out, are covered with a dark glutinous Balsam, which smells very strong when touched, and adheres to the Fingers. The Leaves of this Tree fall off at *Michaelmas*, and new Leaves come out the latter End of *February*, or the Beginning of *March*; for it is one of the earliest Trees in coming out in the Spring.

It may be easily propagated by Cuttings, which should be planted in the Middle of *February*, just before they put out Leaves, in a Bed of fresh rich Earth exposed to the Morning Sun; and if the Spring should prove dry, they must be frequently refreshed with Water, which will greatly forward their putting out Roots. The Ground between these Cuttings should be constantly kept clear from Weeds; and if at *Michaelmas* some rotten Tanners-bark is spread on the Surface of the Ground about three Inches thick, it will keep the Roots warm, and prevent the Frost from entering of the Ground, which might injure the Roots while they are so young. In the following *February*, before the Plants have put out, they

may be transplanted where they are designed to remain; which should be in a fresh loamy Soil not too strong or wet, and in a sheltered Situation, where they will thrive very fast, and being intermixed with other Trees of the same Growth, will have a good Effect in Wilderiness Plantations.

This Plant is very subject to put out several lateral Branches near the Ground; so if these are not pruned off, the Plants will not advance in Height, but rather form themselves into a thick Bush: therefore those which are designed to be trained up into Stems, should have their Side-shoots rubbed off as fast as they are produced, in order to encourage the leading Shoot; but this should only be practised on a few Trees, because they will appear more beautiful, when they are permitted to grow after their usual manner; for when they have many Branches, they will fill up the Spaces under larger Trees, so will thicken the Quarters where they are planted, and be more useful than if they had but one Stem, because they never rise to be large Trees.

1. *XANTHOXYLUM spinosum, lentisci longioribus foliis, euonymi fructu capsulari, ex insula Jamaicensi. Pluk. Phyt. tab. 328. f. 6.* The Pellitory or Tooth-ach-tree, *vulgô*.

2. *XANTHOXYLUM aculeatum, fraxini sinuosis & punctatis foliis, Americanum. Pluk. Almagest.* Prickly Yellow-wood, *vulgô*.

The first of these Trees grows in *South Carolina* and *Georgia*, from whence the Seeds have been brought to *England*, where many of the Plants have been raised, and are preserved in some curious Gardens. This Tree, in the natural Places of its Growth, usually rises about sixteen Feet high, and hath a Trunk a Foot thick, which is covered with a rough ash-coloured Bark, having many pyramidal Protuberances, each being concluded by a sharp Thorn. The Leaves consist of four or five Pair of Lobes, and are terminated by an odd one: these are about the Size of those of the Ash-tree, but rougher, deeper veined, and sawed on their Edges. At the Extremity of the Branches are produced loose Spikes of small white Flowers, which have five Petals or Leaves, and in the Centre are several red Chives. Each of these Flowers is succeeded by four shining black Seeds, which are inclosed in a roundish green Capsule. The Leaves of this Tree smell like those of the Orange-tree, and are very hot and aromatic, as are the Seeds and Bark of the Tree, which are used by the People who inhabit the Sea Coasts of *Carolina* and *Virginia*, to cure the Tooth-ach, in the same manner as the Root of Pellitory of *Spain* is in *Europe*, from whence it had this Name.

This Tree may be propagated by the Seeds, which should be sown in Pots filled with fresh Earth, and plunged into a moderate Hot-bed of Tanners-bark, observing frequently to moisten the Earth, which will promote the Vegetation of the Seeds. If the Seeds are fresh, and sown early in the Spring, many of the Plants will

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will come up the same Season; but if they are sown late in the Year, they will not come up until the following Spring. Therefore, whenever these Seeds are sown in the Spring, and the Plants do not appear by the Middle of *May*, the Pots should be removed out of the Hot-bed, and placed in a sheltered Situation, exposed only to the Morning Sun, where they should remain for the Summer Season; during which time they should be kept clear from Weeds, and in dry Weather they must be watered two or three times a Week. The Beginning of *October*, the Pots should be removed into a warmer Situation, and either placed under a Hot-bed Frame, or plunged into some old Tanners-bark, under a Wall or Pale exposed to the South Sun; and if the Frost should prove severe, they must be covered to protect the Seeds therefrom, otherwise they will be in Danger of perishing. The Middle of *April* following, the Pots should be plunged into a moderate Hot-bed of Tanners-bark, which will bring up the Plants in a little time; and if they are permitted to remain in the same Bed until the Middle of *May*, it will greatly forward them in their Growth; but during this time, the Glasses of the Hot-bed should be raised every Day in warm Weather, to admit fresh Air to the Plants; and then they should be inured to bear the open Air by Degrees; for toward the Middle or latter End of *May*, the Pots should be taken out of the Hot-bed, and placed in a sheltered Situation, where they should remain during the Summer Season, observing to keep them constantly clear from Weeds, and in dry Weather they should be frequently refreshed with Water. The Autumn following, these Pots must be placed under a Frame, where they should be exposed every Day to the open Air in mild Weather; but in Frosts the Glasses must be put over them to screen the Plants, which, while they are young, will be tender, and in Danger of suffering by Cold. The following Spring, before the Plants begin to shoot, they should be carefully transplanted each into a separate small Pot, filled with fresh Earth. If they are plunged into a moderate Hot-bed, it will cause them to take new Root; and if they are kept in this Bed till the Middle of *May*, it will bring the Plants forward apace; but then they should have a large Share of Air in warm Weather, otherwise they will draw up too weak; and in *May* they should be placed in the open Air in a sheltered Situation, where they may remain till the following Autumn; during which time they must be constantly supplied with Water in dry Weather, and must be constantly kept clear from Weeds. At *Michaelmas* the Plants should be again placed under a Hot-bed Frame, to screen them from the Frost, observing always in mild Weather to let them have the free open Air, and never covering them but in bad Weather. The Spring following, most of the Plants may be shaken out of the Pots, and planted in the full Ground, amongst other hardy exotic Trees in Wilderness Quarters; where, if they are screened by larger Trees, and the Soil in which they are planted is rich

and moist, they will thrive very well, and make an agreeable Variety. Some of the Plants may be preserved in Pots a Year or two longer, to be sheltered in the Winter, lest those which are planted in the full Ground, should suffer by a severe Winter while they are young. This Tree loses its Leaves in Autumn, and puts out new Leaves the following *April*; but when the Plants grow very freely in the latter Part of the Summer, and some sharp Frosts come on in the Autumn, it often kills the tender Shoots, unless they are well protected; so that where they are not well screened by larger Trees, they should have some artificial Shelter, and if some old Tan or Dung be laid on the Surface of the Ground about their Roots in Autumn, it will prevent the Frost from penetrating of the Ground, which will be very useful to the Plants.

The second Sort is much more tender than the former, so must be sown on a Hot-bed early in the Spring; and when the Plants are come up, they should be each transplanted into a small Pot filled with fresh rich Earth, and plunged into a Hot-bed again, where they must be screened from the Sun until they have taken new Root; after which time they must be treated in the same manner as hath been directed for the Fustic, which is a Native of the same Countries with this Plant. They must be kept in the Stove, and during the two first Winters, while the Plants are young, they should be plunged into the Bark-bed; but when they are grown pretty strong, they may be placed on Stands in the dry Stove in Winter, and may be exposed abroad in the Middle of Summer, in a warm sheltered Situation, where they will thrive very well. If these Plants are preserved in a kindly Temperature of Warmth in Winter, they will retain their Leaves till the Spring, when they will fall off, just before the new Leaves come out, so will not remain long destitute of Leaves. They have not produced any Flowers in this Country as yet.

CALTHOIDES foliis oblongis caesis crassis.
D. Shaw. Bastard-marygold, with thick oblong Sea-green Leaves.

This Plant was discovered in *Africa*, by the Reverend Doctor *Shaw*, who brought the Seeds into *Europe*; from which many of the Plants have been raised, which thrive extremely well, and resist the Cold of this Climate in the open Air, but do not often produce their Flowers. It produces many trailing Branches (which if covered with Earth will put out Roots, and may be taken off to propagate the Plant): these are furnished with oblong smooth Leaves, somewhat resembling those of the Woad, but are thicker, and more succulent; the Flowers are produced at the Extremity of the Branches, which are of a bright yellow Colour, and radiated like those of the Marygold: these are included in a simple plain Empalement, which is divided into five broad Segments, and as the Flower decays, enwraps the Seeds, which are oval, and furnished with Down.

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As this Plant rarely produces good Seeds in *England*, so the best Method to propagate it is by Cuttings, which if planted in a shady Border, and plentifully supplied with Water, will take Root in about two Months, and may then be transplanted where they are designed to remain, which should be in a warm Situation, and on a dry Soil; for if they are too much exposed to cold Winds, they will suffer in the Winter therefrom; and if the Soil is moist, they will rot in wet Seasons: nor should the Earth be very rich, because that will cause the Plants to grow very luxuriant, which will prevent their flowering, and render them less able to resist the Cold; so that the best Place to plant these Plants, is on a dry rubbishy Border, exposed to the South, and defended by Walls or Pales from the North and East Winds; in which Situation the Plants will abide several Years, and sometimes produce their Flowers.

The Branches of these Plants which trail on the Ground, and put out Roots, may be also

taken off and transplanted for an Increase; or if they are pegged down into the Earth in the same manner as is practised in making of Layers, they will take Root in about two Months, and may then be transplanted. The best time for planting of the Cuttings, or to lay down the Branches, is in *July*, that they may be rooted before *Michaelmas*; when they should be transplanted, that they may be well rooted before the Frost comes on. It will be proper to preserve two or three of these Plants in Pots, that they may be removed into Shelter, lest a very severe Winter should destroy those which are planted in the full Ground.

This Plant doth not rise above sixteen or eighteen Inches high, but is very subject to send out many lateral Branches, which trail on the Ground, and form a small Bush, which continuing green throughout the Year, makes an agreeable Variety in the Winter Season: so may be allowed a Place in good Gardens.





A CATALOGUE of such HARDY-TREES and SHRUBS, as shed their Leaves in Winter, and will thrive in the open Air in England; ranged according to their several Growths; whereby a Person may be directed how to dispose them in Plantations, so as to render them most ornamental.



IN ranging of these Trees, I shall put down all such as grow fifty Feet high and upward, as those of the largest Growth; and those which grow from thirty to fifty Feet, as Trees of middling Growth; and those which grow from fifteen to thirty Feet, as Trees of the smallest Growth, under which Height the others will be ranged as Shrubs. And in this I shall have regard to their common Growths, and not their extraordinary Heights, to which they sometimes arrive. As in the Order of the *Dictionary* the Plants are ranged according to their most received *Latin* Names, so I shall observe the same Method in these Lists, adding their common *English* Names, by which they are known amongst the Gardeners.

A List of the tallest deciduous Trees.

ACER majus, multis falso Platanus. J. B. *The Sycamore.*

Acer maximum, foliis trifidis vel quinquefidis, Virginianum. Pluk. *Virginian Ash-leav'd Maple.*

Acer Platanoides. Munt. Hist. *The Norway Maple.*

Carpinus. Dod. p. *The Hornbeam-tree.*

Castanea fativa. C. B. P. *The Chestnut-tree.*

Cerasus major ac sylvestris, fructu subdulci, nigro colore inficiente. C. B. *The Black Cherry-tree.*

Cupressus Virginiana, foliis Acaciae deciduis. H. L. *The American Cypress-tree.*

Fagus. Dod. p. *The Beech-tree.*

Fagus Americana, latiore folio. *The American Beech-tree.*

Fraxinus excelsior. C. B. *The Ash-tree.*

Fraxinus ex Nova Angliâ, pinnis foliorum in mucronem productioribus. *The New-England Ash.*

VCL. II.

Hippocastanum vulgare. Inst. *The Horse-Chestnut-tree.*

Larix folio deciduo, conifera. J. B. *The Larch-tree.*

Larix folio deciduo, rudimentis conorum candidissimis. Pluk. Alm. *The Larch-tree, with white Rudiments to the Cones.*

Malus sylvestris, fructu valde acerbo. Inst. *The Crab-tree.*

Morus fructu nigro. C. B. P. *The common Black Mulberry.*

Nux juglans, five regia vulgaris. C. B. P. *The common Walnut-tree.*

Nux juglans fructu maximo. C. B. P. *The Walnut with the largest Fruit.*

Nux juglans fructu tenero, et fragili putamine. C. B. P. *The thin-shell'd Walnut.*

Nux juglans fructu perduro. Inst. *The hard-shell'd Walnut.*

Nux juglans fructu serotino. C. B. P. *The late Walnut.*

Nux juglans Virginiana nigra. H. L. *The Virginia Black Walnut.*

Nux juglans Virginiana nigra, fructu oblongo, profundissime insculpto. Rand. *The long Black Virginia Walnut.*

Platanus orientalis verus. Park. Theat. *The Eastern Plane-tree.*

Platanus occidentalis, aut Virginienfis. Park. Theat. *The Western Plane-tree.*

Platanus orientalis, aceris folio. Tourn. Cor. *The Spanish Plane-tree.*

Populus alba, majoribus foliis. C. B. P. *The Abele-tree.*

Populus alba, minoribus foliis. Lob. Icon. *The White Poplar.*

Populus nigra. C. B. P. *The Black Poplar.*

Populus tremula. C. B. P. *The Aspen-tree.*

Populus nigra Caroliniana, folio maximo, gemmis balsamum odoratissimum fundentibus.

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Catesb.

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Catesb. Hist. Car. *The Carolina Black Poplar.*
Pseudoacacia vulgaris. Inst. R. H. Vir-
ginian *Acacia.*

Pseudoacacia filiquis glabris. Boerh. Ind.
Virginian *Acacia*, with smooth Pods.

Pyrus sylvestris. C. B. P. *The wild Pear-*
tree.

Pyrus fativa, flore pleno. H. R. P. *The*
Pear-tree with double Flowers.

Quercus latifolia mas, quæ brevi pediculo
est. C. B. P. *The Oak-tree, with short Foot-*
stalks to the Leaves.

Quercus latifolia foemina. C. B. P. *The*
broad-leav'd Oak, with long Footstalks.

Quercus calyce echinato, glande majore.
C. B. P. *The Cerrus.*

Quercus Virginiana, rubris venis muricata.
Pluk. Phyt. *The Scarlet Oak.*

Quercus castaneæ foliis, procera arbor Vir-
giniana. Pluk. Phyt. *The Virginian Oak,*
with Chesnut Leaves.

Quercus (forte) Marylandica, folio trifido
ad sassafras accedente. Raii Hist. *The Black*
Maryland Oak.

Quercus Caroliniensis, virentibus venis mu-
ricata. Catesb. Hist. Nat. *The White Oak of*
Carolina.

Tilia foemina, folio majore. C. B. P. *The*
broad-leav'd Lime-tree.

Tilia foemina, folio minore. C. B. P. *The*
small-leav'd Lime-tree.

Tilia foliis molliter hirsutis, viminibus rubris,
fructu tetragono. Raii Hist. *The red-twigg'd*
Lime-tree.

Tilia Caroliniana, folio longius mucronato.
The Carolina Lime-tree

Tulipifera Virginiana, tripartito aceris folio,
mediâ laciniâ veluti abscissa. Pluk. Phyt. *The*
Tulip-tree.

Ulmus campestris et Theophrasti. C. B. P.
The common English Elm.

Ulmus folio latissimo scabro. Ger. Emac.
The Witch-bazel, or broad rough-leav'd Elm.

Ulmus vulgarissima, folio lato glabro. Ger.
Emac. *The Witch-Elm.*

Ulmus major Hollandica, angustis et magis
acuminatis samarris, folio latissimo scabro.
Pluk. Alm. *The Dutch Elm.*

Ulmus minor, folio angusto glabro. *The*
Hertfordshire Elm.

Ulmus folio lato scabro, cortice cinereo gla-
bro. *The White Witch-Elm, by some called the*
Irish Elm.

Ulmus folio lato scabro, angustis samarris.
The French Elm.

Trees of middling Growth, which cast
their Leaves in Winter.

A Cacia Americana, abruæ foliis, triacanthos,
five ad axillas foliorum spina triplici do-
nata. Pluk. Mantiff. *The three-thorned Acacia.*

Acacia Americana palustris, abruæ foliis,
spinis rarioribus. *The Water-Acacia of Caro-*
lina.

Acacia Americana, abruæ foliis, triacanthos,
capsulâ ovali semen unicum claudente. Catesb.
Hist. Nat. *The three-thorned Acacia of America,*
with oval Pods containing one Seed in each.

Acer majus, folio rotundiore, minus laciniato,
an opulus Italarum. Raii Hist. *The rounder-*
leav'd Italian Maple.

Acer Virginianum, folio majore, subtus ar-
genteo, supra viridi splendente. Pluk. Phyt.
The Virginia flowering Maple.

Acer Virginianum, folio majore splendente.
The Sugar Maple.

Alnus rotundifolia glutinosa viridis. C. B. P.
The common or round-leav'd Alder.

Alnus folio oblongo viridi. C. B. P. *The*
long-leav'd or Dutch Alder.

Betula. Dod. *The Birch-tree.*

Celtis fructu nigricante. Inst. *The Nettle-*
tree, with Black Fruit.

Celtis fructu obscure purpurascente. Inst. R.
H. *The American Nettle-tree, with purple*
Fruit.

Celtis orientalis, foliis minoribus & crassiori-
bus, fructu flavo. Tourn. Cor. *The eastern*
Nettle-tree, with smaller and thicker Leaves, and
yellow Fruit.

Celtis fructu luteo ampliori. *The Nettle*
tree, with larger yellow Fruit.

Celtis orientalis, folio ampliore, magno
fructu. Tourn. Cor. *Eastern Nettle-tree, with*
a large Fruit.

Cerasus fativa. C. B. P. *The common Cherry-*
tree.

Cratægus folio subrotundo ferrato, subtus
incano. Inst. R. H. *The white Beam-tree, or*
Aria Theophrasti.

Cratægus folio oblongo ferrato, utrinque
virente. Inst. R. H. *The wild Service, with*
a longer green serrated Leaf.

Cratægus folio laciniato. Inst. R. H. *The*
common wild Service-tree.

Cytisus Alpinus latifolius, flore racemoso
pendulo. Inst. R. H. *The Laburnum, or false*
Ebony.

Fagus orientalis, ampliore folio. Tourn. Cor.
Eastern Beech-tree, with a larger Leaf.

Fraxinus florifera botryoides. Mor. Hist.
The flowering Ash.

Fraxinus rotundiore folio. C. B. P. *The*
Manna-Ash.

Fraxinus Caroliniana, latiori fructu. Rand.
The Carolina Ash.

Fraxinus orientalis, longissimo folio, profundè
ferrato. Tourn. Cor. *Eastern Ash, with a long*
Leaf deeply serrated.

Nux juglans Virginiana, foliis vulgari simi-
lis, fructu subrotundo, cortice duriore lævi.
Pluk. Alm. *The Hickery-tree.*

Nux

A D D E N D A.

Nux juglans Virginiana alba minor, fructu nucis moschatae similis, cortice glabro, summo fastigio veluti in aculeum producto. Pluk. The sweet Hickery-nut.

Nux juglans bifera. C. B. P. The twice-bearing Walnut.

Nux juglans folio ferrato. C. B. P. The Walnut-tree with sawed Leaves.

Platanus Americanus, foliis oblongis ex adverso sitis. The Button-tree.

Prunus sylvestris major. J. B. The black Bullace-tree.

Pyrus sativa biflora. The Pear-tree which flowers twice every Year.

Quercus foliis molli lanugine pubescentibus. C. B. P. The Oak with woolly Leaves.

Quercus orientalis, castaneae folio, glande recondita in cupula crassa & squamosa. Tourn. Cor. The Chestnut-leav'd eastern Oak, with a thick scaly Cup.

Quercus orientalis latifolia, glande maxima, cupula crinita. Tourn. Cor. The broad-leav'd eastern Oak, with a large Acorn, and a hairy Cup.

Quercus orientalis latifolia, foliis ad costam pulchre incis, glande maxima, cupula crinita. Tourn. Cor. The broad-leav'd eastern Oak, whose Leaves are finely cut, and a large Acorn having a hairy Cup.

Quercus Mariana, muricatis castaneae foliis subtus villosis. Banist. The champion-chestnut Oak.

Quercus esculi divisura, foliis amplioribus aculeatis. Pluk. Phyt. The red Maryland Oak.

Quercus, an potius ilex Marylandica, folio longo angusto salicis. Raii Hist. The willow-leav'd Oak of Maryland.

Salix vulgaris alba arborescens. C. B. P. The common white Willow.

Salix vulgaris nigricans, folio non ferrato. C. B. P. The black Willow.

Sorbus sativa. C. B. P. The true Service-tree.

Sorbus sativa, magno fructu nonnihil turbinato rubro. Inst. R. H. The red Service.

Sorbus sativa, magno fructu turbinato, pallide rubente. Inst. R. H. The Service-tree, with pale red Fruit.

Sorbus sativa, fructu pyriformi, medio rubente. H. Cath. The Service-tree, with pear-shap'd Fruit.

Sorbus sativa, fructu ovato, medio rubente. H. Cath. The Service-tree, with egg-shap'd Fruit.

Sorbus sativa, fructu serotino minori turbinato rubente. Inst. The late Service, with smaller Fruit.

Sorbus orientalis, fraxini folio. Tourn. Cor. Eastern Service, with an Ash-leaf.

Sorbus orientalis, fructu magno, compresso & flavescente. Tourn. Cor. Eastern Service, with a large yellowish compress'd Fruit.

Styrax arbor Virginiana, aceris foliis. Raii Hist. The sweet-gum Tree, or Liquid-amber.

A List of the smallest growing Trees, which shed their Leaves in Winter.

A CER campestre & minus. C. B. P. *The common Maple.*

Acer trifolium. C. B. P. The Montpellier Maple.

Acer Creticum. Prosp. Alp. The Candia Maple.

Acer orientale, hederæ folio. Tourn. Cor. Eastern Maple, with an Ivy-leaf.

Alnus folio incano. C. B. P. The white-leav'd Alder-tree.

Alnus montana, pallido glabro sinuato ulmi folio. Bocc. Mus. The Mountain-alder, with an Elm-leaf.

Alnus foliis eleganter incis. D. Breman. The cut-leav'd Alder.

Amygdalus sativa, fructu majori. C. B. P. The Almond-tree, with large Fruit.

Amygdalus sativa, fructu minori. C. B. P. The Almond-tree, with smaller Fruit.

Amygdalus dulcis, putamine molliore. C. B. P. The Almond-tree, with thin Shells.

Armeniaca fructu majori, nucleo amaro. Inst. The Apricock-tree.

Carpinus orientalis, folio minori, fructu brevi. Tourn. Cor. The eastern Hornbeam, with a small Leaf, and a short Fruit.

Carpinus Virginiana florescens. Pluk. Phyt. The Virginia flowering Hornbeam.

Carpinus seu ostrya ulmo similis, fructu racemoso, lupuli similis. C. B. P. The Hop-hornbeam.

Castanea humilis racemosa. C. B. P. Low branching Chestnut.

Cerasus racemosa sylvestris, fructu non eduli. C. B. P. The Bird-cherry.

Cerasus racemosa sylvestris, fructu non eduli rubro. H. R. Par. The Cornish Cherry.

Cerasus racemosa hortensis. C. B. P. The cluster Cherry.

Cerasus hortensis, flore pleno. C. B. P. The double flowering Cherry.

Cerasus hortensis, flore roseo. C. B. P. The Cherry-tree, with very double Flowers.

Cornus hortensis mas. C. B. P. The Cornelian Cherry-tree.

Cornus hortensis mas, fructu ceræ colore. C. B. P. The Cornelian Cherry, with yellowish Fruit.

Cornus hortensis mas, fructu albo. C. B. P. The white Cornelian Cherry.

Cornus hortensis mas, fructu saturatius rubente, cum officulo crassiore & brevior. C. B. P. The Cornel-tree, with deep-red Fruit, having a thick short Stone.

Cornus foemina. C. B. P. The Dogwood-tree.

Cornus orientalis sylvestris, fructu teretiformi. Tourn. Cor. Wild eastern Dogwood, with a taper Fruit.

Colutea vesicaria. C. B. P. The Bladder-senna.

Colutea vesicaria vesiculis rubentibus. J. B. Bladder-senna with red Pods.

Corylus

A D D E N D A.

Corylus sativa, fructu albo minore, five vulgaris. C. B. P. *The Hazel-nut.*

Corylus sativa, fructu rotundo maximo. C. B. P. *The Cob-nut.*

Corylus sativa, fructu oblongo rubente. C. B. P. *The red Philbert.*

Corylus sativa, fructu albo. *The white Philbert.*

Corylus Hispanica, fructu majore anguloso. Pluk. Alm. *The Spanish Nut.*

Corylus Bizantina. H. L. *The Bizantine Nut.*

Cratægus Virginiana, foliis arbuti. Inst. R. H. *The Virginian Service-tree.*

Cydonia fructu oblongo læviori. Inst. R. H. *The smooth Quince of a Pear-shape.*

Cydonia fructu breviori & rotundiori. Inst. R. H. *The Apple-quince.*

Cydonia latifolia Lusitanica. Inst. R. H. *The Portugal Quince, with broad Leaves.*

Cydonia angustifolia vulgaris. Inst. R. H. *The narrow-leav'd Quince.*

Cytisus Alpinus angustifolius, flore racemoso pendulo longiori. Inst. R. H. *The narrow-leav'd Laburnum, with long Bunches of Flowers.*

Cytisus Alpinus, flore racemoso pendulo breviori. Inst. R. H. *The Laburnum, with short Bunches of Flowers.*

Elæagnus orientalis angustifolius, fructu parvo olivæformi subdulci. Tourn. Cor. *The eastern wild Olive, with narrow Leaves, and small Fruit.*

Elæagnus orientalis latifolius, fructu maximo. Tourn. Cor. *The eastern wild Olive, with broad Leaves, and the largest Fruit.*

Elæagnus orientalis angustifolius, fructu minimo rotundiori & subacido. Tourn. Cor. *The narrow-leav'd eastern wild Olive, with the least round Fruit,*

Elæagnus non spinosa, foliis longis & angustis, fructu olivæformi. *The wild Olive without Thorns, having long narrow Leaves.*

Evonymus vulgaris, granis rubentibus. C. B. P. *The Spindle-tree with red Seeds.*

Evonymus granis nigris. C. B. P. *The Spindle-tree with black Seeds.*

Evonymus latifolius. C. B. P. *The broad-leav'd Spindle-tree.*

Ficus sativa, fructu violaceo longo, intus rubente. Inst. R. H. *The long purple Fig.*

Ficus sativa, fructu præcoci albedo fugaci. Inst. R. H. *The Marseilles Fig.*

Ficus sativa, fructu globoso albo mellifluo. Inst. R. H. *The round white Fig.*

Ficus sativa, fructu parvo fusco, intus rubente. Inst. R. H. *The small Murrey-Fig.*

Ficus sativa, fructu longo majori nigro, intus purpurascente. Inst. *The long black Fig.*

Ficus sativa, fructu globoso fusco, intus rubente. *The Brunswick Fig.*

Ficus orientalis, foliis laciniatis, fructu maximo albo. *The Turkey Fig.*

Ficus orientalis, foliis variis. *The Sycamore.*

Ficus foliis robustioribus, & ramis erectioribus. H. L. *The large Fig-tree.*

Fraxinus humilior, five altera Theophrasti, minore & tenuiore folio. C. B. P. *The dwarf-ash Tree, with a smaller and narrower Leaf.*

Frutex Virginianus trifolius, ulmi samarris Banist. *Sbrub Trefoil.*

Guaiacana. J. B. *The Indian Date-plum.*

Guaiacana angustiore folio. Inst. R. H. *The narrow-leav'd Date-plum.*

Guaiacana five Pithamin Virginianum. Park. *The Persimon.*

Ligustrum. J. B. *The Privet.*

Lilac Matth. *The common Lilac with blue Flowers.*

Lilac flore albo. Inst. R. H. *The Lilac with white Flowers.*

Lilac flore saturatè purpureo. Inst. *The Scotch Lilac.*

Malus sylvestris Virginiana, floribus odoratus. *The sweet Virginia Crab.*

Mespilus Germanica, folio laurino, non ferato, five *mespilus sylvestris*. C. B. P. *The common Medlar.*

Mespilus folio laurino, major. C. B. P. *The large Dutch Medlar.*

Mespilus folio laurino, major, fructu præcoci sapidiori oblongo, læviori seu rariori substantiâ. Hort. Cath. *The early Medlar, with oblong Fruit.*

Mespilus folio laurino, major, fructu minori, rariori substantiâ. Hort. Cath. *The small Italian Medlar.*

Mespilus apii folio laciniato. C. B. P. *The L'Azarole or Neapolitan Medlar.*

Mespilus apii folio laciniato, flore pleno. H. L. *The L'Azarole with double Flowers.*

Mespilus apii folio laciniato, fructu majore, intensius rubro, gratioris saporis. Hort. Cath. *The large red L'Azarole, of the most grateful Flavour.*

Mespilus apii folio laciniato, fructu ex albo lutescente minori. Hort. Cath. *The L'Azarole with small whitish yellow Fruit.*

Mespilus apii folio laciniato, fructu majore albo, grato sapore. *The L'Azarole with large white Fruit of a grateful Taste.*

Mespilus spinosa, five *oxyacantha Virginiana*. H. L. *The Cockspur Hawthorn.*

Mespilus aculeata pyrifolia denticulata splendens, fructu insigni rutilo Virginienfis. Pluk. Phyt. *The Virginian L'Azarole, with red Fruit.*

Mespilus Virginiana, apii folio, vulgari similis, major, grandioribus spinis. Pluk. Phyt. *The Virginia Haw, with strong Thorns.*

Mespilus Americana, apii folio, vulgari similis, major, fructu luteo. *The yellow American Haw.*

Mespilus prunifolia Virginiana non spinosa, fructu nigricante. Pluk. Phyt. *The black Virginia Haw.*

Mespilus

A D D E N D A.

Mespilus apii folio, sylvestris spinosa, five oxyacantha. C. B. P. *The white Thorn.*

Mespilus spinosa, five oxyacantha, flore pleno. Inst. R. H. *The Hawthorn with double Flowers.*

Mespilus Cretica, apii folio lucido, elegantius laciniato. Tourn. Cor. *Candy Hawthorn, with a shining Leaf elegantly jagged.*

Mespilus orientalis, apii folio, sylvestris spinosa, five oxyacantha, flore purpureo. Tourn. Cor. *Eastern Hawthorn, with a purple Flower.*

Mespilus Cretica, folio circinato & quasi cordiformi. Tourn. Cor. *Candy Medlar, with a roundish heart-shap'd Leaf.*

Mespilus orientalis, five oxyacantha, foliis hirsutissimis. Tourn. Cor. *Eastern Hawthorn, with very rough Leaves.*

Mespilus orientalis, apii folio villoso, magno fructu pentagono purpureo glabro. Tourn. Cor. *Eastern hairy Hawthorn, with a large smooth five-cornered purple Fruit.*

Mespilus orientalis, tanacetii folio villoso, magno fructu pentagono, e viridi flavescente. Tourn. Cor. *Eastern Hawthorn, with a hairy Tansey-leaf, and a large five-corner'd yellowish-green Fruit.*

Morus fructu nigro minori, foliis eleganter laciniatis. Inst. R. H. *The smaller black Mulberry, with Leaves finely jagged.*

Morus fructu albo. C. B. P. *The white Mulberry.*

Morus fructu albo minori, ex albo purpurascens. Inst. R. H. *The small white Mulberry, with purplish white Fruit.*

Morus alba, fructu minori insulso. Hort. Cath. *The white Mulberry, with small insipid Fruit.*

Morus Virginienſis arbor, loti arboris instar racemosa, foliis amplissimis. Pluk. Phyt. *Virginia Mulberry.*

Morus Caroliniana, foliis latissimis scabris, fructu rubro longiori. *The Carolina Mulberry, with long slender red Fruit.*

Nux juglans foliis laciniatis. D. Reneal. *The Walnut with jagged Leaves.*

Nux juglans fructu minimo. D. Breman. *The least Walnut.*

Nux juglans Americana alba minor, fructu minimo anguloso. *The small Hickery or Pignut.*

Opulus Ruelli. *The Marsh Elder.*

Opulus flore globoso. Inst. R. H. *The Guelder Rose.*

Opulus orientalis, folio amplissimo tridentato. Tourn. Cor. *Eastern Guelder Rose, with a very large three-pointed Leaf.*

Pavia. Boerh. Ind. alt. *The scarlet flowering Horse Chestnut.*

Perſica molli carne, & vulgaris, viridis & alba. C. B. P. *The Peach-tree.*

Perſica vulgaris, flore pleno. Inst. R. H. *The double-flowering Peach.*

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Prunus sylvestris, fructu majore albo. Raii Syn. *The white Bullace-tree.*

Prunus flore pleno. H. R. Par. *The double flowering Plum-tree.*

Prunus sylvestris, fructu parvo serotino. *The Winter Crack.*

Prunus fructu subrotundo, cerasi formâ. *The Cherry Plum.*

Quercus calyce hispido, glande minore. C. B. P. *The lesser Cerrus.*

Quercus Burgundiaca, calyce hispido. C. B. P. *The Burgundy Oak.*

Quercus gallam exiguae nucis magnitudine ferens. C. B. P. *The gall-bearing Oak.*

Quercus foliis muricatis, non lanuginosis, gallâ superiori similis. C. B. P. *Another gall-bearing Oak.*

Quercus Hispanica, foliis magis dissectis. *The cut-leav'd Spanish Oak.*

Quercus orientalis, glande cylindriciformi, longo pediculo insidente. Tourn. Cor. *The eastern Oak, with cylindrical Acorns having long Footstalks.*

Quercus orientalis angustifolia, glande minori, cupula crinita. Tourn. Cor. *The narrow-leav'd eastern Oak, with a small Acorn having a hairy Cup.*

Quercus orientalis, folio subrotundo minori, glande magna striata. Tourn. Cor. *The round-leav'd eastern Oak, with a furrowed Acorn.*

Quercus orientalis, folio subrotundo, leviter inciso, fructu minori cylindriciformi. Tourn. Cor. *The eastern Oak, with roundish Leaves lightly jagged, and a cylindrical Acorn.*

Quercus Mariana, oleæ folio, glande parvâ compresso, ad apiculam eleganter radiato. Pluk. Mantif. *The swamp Spanish Oak.*

Rhamnus catharticus. C. B. P. *The Buckthorn-tree.*

Rhus folio ulmi. C. B. P. *The elm-leav'd Sumach.*

Rhus Virginianum. C. B. P. *The Virginian Sumach.*

Salix vulgaris rubens. C. B. P. *The red Osier.*

Salix fativa, lutea, folio crenato. C. B. P. *The yellow Osier.*

Salix folio amygdalino, utrinque virente, aurito. C. B. P. *The green Almond-leav'd Osier.*

Salix folio amygdalino, utrinque aurito, corticem abjiciens. Raii Syn. *The Almond-leav'd Willow, that casts its Bark.*

Salix folio laureo, seu lato glabro odorato. Phyt. Brit. *The Bay-leav'd sweet Willow.*

Salix folio longo, utrinque virente, odorato. *The long-leav'd sweet Willow.*

Salix folio longo latoque splendente, fragilis. Raii Syn. *The crack Willow.*

Salix latifolia rotunda. C. B. P. *The round-leav'd Sallow.*

Salix folio ex rotunditate acuminato. C. B. P. *The pointed round-leav'd Sallow.*

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Salix

A D D E N D A.

Salix latifolia, folio splendente. Raii Syn. *Broad shining-leav'd Willow.*

Salix orientalis, flagellis deorsum pulchre pendentibus. Tourn. Cor. *The weeping Willow.*

Sambucus fructu in umbellâ nigro. C. B. P. *The common Elder.*

Sambucus fructu in umbellâ viridi. C. B. P. *The Elder with green Berries.*

Sambucus fructu albo. Lob. *The white-berried Elder.*

Sambucus laciniato folio. C. B. P. *The Parsley-leav'd Elder.*

Silquastrum. Cast. Dur. *The Judas-tree.*

Silquastrum flore albo. Inst. R. H. *The Judas-tree with a white Flower.*

Silquastrum amplioribus siliquis, & foliis acuminatis. Inst. R. H. *Judas-tree, with larger Pods, and pointed Leaves.*

Silquastrum Canadense. Inst. R. H. *The Canada Judas-tree or Red-bud.*

Silquastrum quæ ceratia agrestis, mucronato folio, floribus parvis, Caroliniana. Pluk. Alm.

Carolina Judas-tree, with a pointed Leaf, and small Flowers.

Sorbus aucuparia. J. B. *The wild Service or Quicken-tree.*

Tacamahaca foliis crenatis, fadelhout seu lignum ad ephippia conficienda aptum. Par. Bat. prod. *The Tacamahaca.*

Terebinthus vulgaris. C. B. P. *The Turpentine-tree.*

Terebinthus peregrina, fructu majore, pistachiis simili eduli. C. B. P. *The Turpentine-tree, with larger Fruit resembling the Pistachia-nut.*

Terebinthus Cappadocica. H. R. Par. *The Turpentine-tree of Cappadocia.*

Terebinthus Indica Theophrasti, pistachia Dioscoridis. Lob. Adv. *The Pistachia.*

Terebinthus seu pistachia trifolia. Inst. R. H. *The three-leav'd Pistachia.*

A CATALOGUE of SHRUBS, which shed their Leaves in Winter.

ALNUS Alpina minor. C. B. P. *Small Alpine Alder.*

Alnus montana, crispo, glutinoso, & denticulato folio. Bocc. Mus. *Mountain Alder, with clammy curled Leaves.*

Amygdalus Indica nana. H. R. Par. *The dwarf Almond.*

Aralia spinosa arborescens. Vaill. Dis. *The Angelica-tree.*

Arbor Virginiana, pisaminis folio, baccata, benzoinum redolens. Pluk. Phyt. *The Benjamin-tree.*

Arbor Zeylanica, cotini foliis subtus lanugine villosis, floribus albis cuculi modo laciniatis. Pluk. Phyt. *The Snowdrop-tree.*

Azedarach. Dod. *The Bead-tree.*

Barba Jovis Americana, pseudoacaciæ foliis, flosculis minimis purpureis. Rand. *The bastard Indigo.*

Berberis dumetorum. C. B. P. *The Berberry or Piperidge-bush.*

Berberis sine nucleo. C. B. P. *The Berberry without Stones.*

Berberis latissimo folio, Canadensis. H. R. Par. *The Canada Berberry.*

Berberis Cretica, buxi folio. Tourn. Cor. *The Candy Berberry with a Box-leaf.*

Berberis orientalis procerior, fructu nigro suavissimo. Tourn. Cor. *Eastern Berberry, with a black sweet Fruit.*

Bignonia Americana, urucu foliis, flore fordidiæ albo, intus maculis purpureis & luteis

adsperso, filiquâ longissimâ & angustissimâ. Catesb. Hist. *The Catalpa.*

Caprifolium Germanicum. Dod. *The common Honeysuckle.*

Caprifolium Italicum. Dod. *The Italian Honeysuckle.*

Caprifolium Italicum perfoliatum præcox. Brofs. *The early white Honeysuckle.*

Caprifolium Germanicum, flore rubello, ferotinum. Brofs. *The late red Honeysuckle.*

Caprifolium non perfoliatum, foliis sinuosis. Inst. R. H. *The oak-leav'd Honeysuckle.*

Caprifolium perfoliatum sempervirens, floribus speciosius. *The evergreen Honeysuckle.*

Caprifolium Creticum, non perfoliatum, foliis cotini, floribus inodoris, partim albis, partim flavescentibus. Tourn. Cor. *Eastern Honeysuckle, with a Coccygria-leaf, and Flowers partly yellow, and partly white, having no Scent.*

Cassine vera perquam similis arbuscula phillyreæ, foliis antagonistis, ex provincia Carolinensi. Pluk. Mant. *The Cassioberry-tree.*

Castanea pumilis Virginiana, racemoso fructu parvo, in singulis capsulis echinatis unico. Banist. *The Chinquapin or dwarf American Chestnut.*

Cerasus sylvestris amara, mahaleb putata. J. B. *The perfumed Cherry.*

Cerasus sylvestris Alpina, folio rotundiore. Inst. *Wild Alpine Cherry, with a rounder Leaf.*

Chamæ-

A D D E N D A.

Chamærhododendron Alpinum glabrum. Inst. *Smooth Rose-laurel of the Alps.*

Chamærhododendron Alpinum serpyllifolium. Inst. *Rose-laurel of the Alps, with a Mother of Thyme-leaf.*

Chamærhododendron Alpinum villosum. Inst. *Hairy Rose-laurel of the Alps.*

Chamæcerasus Alpina, fructu gemino rubro, duobus punctis notato. C. B. P. *The greater red-berried upright Honeysuckle, commonly called the Fly-honeysuckle.*

Chamæcerasus dumetorum, fructu gemino rubro. C. B. P. *The upright red-berried Honeysuckle.*

Chamæcerasus Alpina, fructu nigro gemino. C. B. P. *The black-berried upright Honeysuckle.*

Chamæcerasus montana, fructu singulari cœruleo. C. B. P. *The blue-berried upright Honeysuckle.*

Chamæcerasus orientalis, lauri folio. Tourn. Cor. *Eastern upright Honeysuckle, with a Bay-leaf.*

Colutea orientalis, flore sanguinei coloris, luteâ maculâ notato. Tourn. Cor. *Eastern bladder Senna, with a bloody Flower spotted with Yellow.*

Cornus fœmina laurifolia, fructu nigro cœruleo, officulo compresso, Virginiana. Pluk. Phyt. *The Virginia Dogwood.*

Cornus mas, odorato folio, trifido margine plano, sassafras dicta. Pluk. Phyt. *The Sassafras.*

Cornus fœmina Virginiana, angustiore folio. *The narrow-leav'd Virginia Dogwood.*

Cornus mas Virginiana, foliis oblongis, fructu rubro majore. *The Virginia Cornel-tree.*

Cornus mas Virginiana, flosculis plurimis albidis ex involucrio tetrapetalo rubro irrumpentibus. Banist. *Virginia Dogwood, with many white Flowers inclosed in a red Em-palement.*

Coriaria. Act. Acad. Reg. Par. The myrtle-leaved Sumach.

Cotinus coriaria. Dod. The Coccygria.

Cytisus glabris foliis subrotundis, pediculis brevissimis. C. B. P. *The Cytisus secundus Clusii, vulgô.*

Cytisus glaber viridis. C. B. P. *Cytisus with smooth green Leaves.*

Cytisus glaber nigricans. C. B. P. *Cytisus with dark green Leaves.*

Diervilla Acadiensis fruticosa, flore luteo. Acad. Reg. Par. *Yellow upright Fly-boney-suckle.*

Empetrum montanum, fructu nigro. Inst. R. H. *Black-berried Heath.*

Empetrum Lusitanicum, fructu albo. Inst. R. H. *Portugal white-berried Heath.*

Emerus. Cæsalp. Scorpion Senna.

Emerus minor. Inst. R. H. *Small scorpion Senna.*

Erica vulgaris glabra. C. B. P. *Common Heath.*

Erica vulgaris glabra, flore albo. C. B. P. *Common Heath, with a white Flower.*

Erica frutescens peregrina. C. B. P. *Shrubby Italian Heath.*

Erica humilis, cortice cinereo, arbuti flore. C. B. P. *Dwarf Heath, with an Arbutus Flower.*

Erica tenuifolia. Ger. *Narrow-leav'd Heath.*

Erica vulgaris hirsuta. C. B. P. *Hairy common Heath.*

Frangula. Dod. Black berry-bearing Alder.

Frangula rugosiore & ampliore folio. Inst. R. H. *Berry-bearing Alder, with a larger and rougher Leaf.*

Frangula montana pumila saxatilis, folio subrotundo. Inst. R. H. *Low mountain berry-bearing Alder with a roundish Leaf.*

Frangula montana pumila saxatilis, folio oblongo. Inst. R. H. *Low mountain berry-bearing Heath, with an oblong Leaf.*

Gale frutex odoratus, septentrionalium, elæagnus cordo, chamæleagnus Dodonæi. J. B. *Sweet Gale, or Dutch Myrtle.*

Gale quæ myrto Brabanticæ similis, Carolinensis baccata, fructu racemoso sessili monopyreno. Pluk. Phyt. *The Candleberry-tree.*

Gale quæ myrto Brabanticæ similis, Carolinensis mas. *The male candle-berry Tree.*

Gale quæ myrto brabanticæ similis, Carolinensis humilior, foliis latioribus & magis serratis. Catesb Hist. *The broad-leav'd dwarf Candleberry-tree with sawed Leaves.*

Genista juncea. J. B. *The Spanish Broom.*

Genista Hispanica pumila odoratissima. Inst. R. H. *Dwarf Spanish Broom, with the sweetest Flowers.*

Genista humilior Pannonica. Inst. R. H. *Lower Hungarian Broom.*

Genista Lusitanica, parvo flore luteo. Inst. R. H. *Portugal Broom, with a small yellow Flower.*

Genista tinctoria Germanica. C. B. P. *Greenwood or Wood-waxen.*

Genista tinctoria Austriaca maxima. Boerh. *The greater Wood-waxen of Austria.*

Genista tinctoria Germanica, foliis angustioribus. C. B. P. *Narrow-leav'd German Wood-waxen.*

Genista tinctoria latifolia Lucensis. Inst. R. H. *Broad-leav'd Dyers-Weed of Luca.*

Genista tinctoria frutescens, foliis incanis. C. B. P. *Shrubby Wood-waxen, with hoary Leaves.*

Genista tinctoria Lusitanica maxima, Piurna Lusitanorum. Inst. R. H. *Great Portugal Wood-waxen, called Piurna of the Portuguese.*

Genista ramosa, foliis hyperici. C. B. P. *Branching Broom, with St. Johns-wort Leaves.*

Genista radiata, five stellaris. J. B. *Starry Broom.*

Genista five spartium purgans. J. B. *Purging Broom.*

Genista

A D D E N D A.

Genista minor asphalathoides, vel *genista spinosa* Anglica. C. B. P. *Needle-Furz* or *Petty-whin*.

Grossularia simplicis acino, vel *spinosa sylvestris*. C. B. P. *The common or wild Gooseberry*.

Grossularia spinosa sativa. C. B. P. *The Garden-gooseberry*.

Grossularia fructu obscure purpurascente. Clus. *The purple-bairy Gooseberry*.

Grossularia sive uva crispa alba maxima rotunda. Hort. Ed. *The large round white Gooseberry*.

Grossularia maxima subflava oblonga. Hort. Ed. *The Amber Gooseberry*.

Grossularia fructu rotundo maximo virecente. *The large green Gooseberry*.

Grossularia fructu rubro majore. Boerh. Ind. alt. *The large red Gooseberry*.

Grossularia spinosa sativa, foliis flavescentibus. *The yellow-leav'd Gooseberry*.

Hypericum foetidum frutescens. Inst. R. H. *Stinking shrubby St. John's-wort*.

Hypericum frutescens Canariense multiflorum. H. Amst. *Shrubby many-flowering St. John's-wort of the Canaries*.

Jasminoides sive rhamnus, spinis oblongis, flore candicante. C. B. P. *Bastard Jasmine with a white Flower*.

Ketmia Syrorum quibusdam. C. B. P. *Althæa frutex*, vulgò.

Ketmia Syrorum flore purpureo violaceo. Inst. R. H. *Althæa frutex with a purple Flower*.

Ketmia Syrorum flore albo. Boerh. Ind. alt. *Althæa frutex with a white Flower*.

Ketmia Syrorum floribus ex albo & rubro variis. Inst. R. H. *Althæa frutex with variegated Flowers*.

Lilac ligustri folio. Inst. R. H. *The Persian Lilac*.

Lilac ligustri folio, flore albo. *The Persian Lilac with a white Flower*.

Lilac laciniato folio. Inst. R. H. *The cut-leav'd Persian Lilac*.

Mespilus folio rotundiori, fructu nigro subdulci. Inst. R. H. *The Amelanchier or dwarf Medlar with purple Fruit*.

Mespilus folio subrotundo, fructu rubro. Inst. *The dwarf Medlar, with red Fruit*.

Paliurus. Dod. p. *The Christs-thorn*.

Periploca foliis oblongis. Inst. R. H. *The Virginian Silk*, vulgò.

Perfica Africana nana, flore incarnato simplici. Inst. R. H. *The dwarf Almond*, vulgò.

Perfica Africana nana, flore incarnato pleno. Inst. R. H. *The dwarf Almond, with double Flowers*.

Punica quæ malum granatum fert. Cæsalp. *The Pomegranate*.

Punica flore pleno majore. Inst. R. H. *The Pomegranate with a large double Flower*.

Punica sylvestris. Cord. Hist. *The wild Pomegranate*.

Punica fructu dulci. Inst. R. H. *The sweet Pomegranate*.

Punica flore pleno minore. Inst. R. H. *The Pomegranate with a smaller double Flower*.

Punica flore pleno majore variegato. Inst. R. H. *The Pomegranate with a large double strip'd Flower*.

Quercus pedem vix superans. C. B. P. *The dwarf Oak*.

Quercus humilis, gallis binis, ternis aut pluribus simul junctis. C. B. P. *Dwarf Oak bearing several Galls joined together*.

Quercus pumilis, castanæ folio, Virginienfis. Pluk. Phyt. *The dwarf Chestnut-leav'd Oak of Virginia*.

Quercus humilior, salicis folio brevior. Catesb. Hist. Nat. *The dwarf willow-leav'd Oak of America*.

Rhamnoides florifera, salicis folio. Inst. R. H. *Male Sea Buckthorn*.

Rhamnoides fructifera, foliis salicis, baccis leviter flavescentibus. Inst. R. H. *Sea Buckthorn with Willow-leaves, and light yellowish Berries*.

Rhamnus catharticus minor. C. B. P. *The dwarf Buckthorn*.

Rhamnus catharticus minor, folio longiori. Inst. R. H. *Dwarf Buckthorn, with a longer Leaf*.

Rhamnus tertius, flore herbaceo, baccis nigris. C. B. P. *Buckthorn with a green Flower*.

Rhamnus Hispanicus, buxi folio ampliore. Inst. R. H. *Spanish Buckthorn, with a larger Box-leaf*.

Rhamnus orientalis, amygdali folio ampliore. Tourn. Cor. *Eastern Buckthorn with a larger Almond leaf*.

Rhus Americanus, paniculâ sparsâ herbacea, ramis patulis glabris. Hort. Elth. *American Sumach with loose green Panicles, commonly called New England Sumach*.

Rhus tenuifolius Virginianus humilis: *rhus angustifolius*. C. B. P. *Dwarf narrow-leav'd Virginian Sumach*.

Ribes vulgare, fructu rubro. H. Eyft. *The common red Currant*.

Ribes major, fructu rubro. H. Eyft. *The Dutch red Currant*.

Ribes major, fructu incarnato. *The Campaign Currant*.

Ribes fructu albo. H. Eyft. *The common white Currant*.

Ribes fructu majore albo. *The white Dutch Currant*.

Ribes

A D D E N D A.

Ribes Alpinus dulcis. J. B. *The Gooseberry-leav'd Currant.*

Ribes nigrum vulgo dictum, folio olente. J. B. *The black Currant.*

Ribes Americana, fructu nigro. *The American black Currant.*

Ribes fructu parvo. Mer. Pin. *The small English wild Currant.*

Rosa rubra simplex. C. B. P. *The single red Rose.*

Rosa rubra multiplex. C. B. P. *The double red Rose.*

Rosa sylvestris inodora, seu canina. Park. Theat. *The Wild-briar or Dog-rose.*

Rosa sylvestris, fructu majore hispido. Raii Syn. *The wild Rose, with a large prickly Hip.*

Rosa sylvestris pomifera major nostras. Raii Syn. *The great Apple-bearing English Rose.*

Rosa pumila spinosissima, foliis pimpinellæ glabris, flore albo. J. B. *The dwarf burnet-leav'd Rose.*

Rosa sylvestris, foliis odoratis. C. B. P. *The Sweet-briar or Eglantine.*

Rosa sylvestris odora, five eglanteria, flore duplici. Park. Par. *The Sweet-briar with a semidouble Flower.*

Rosa sylvestris, foliis odoratis, flore pleno. *The Sweet-briar with a double Flower.*

Rosa pimpinella minor Scotica, floribus ex albo & carneo eleganter variegatis. Pluk. Alm. *The Scotch Rose with variegated Flowers.*

Rosa pimpinella minor Scotica, floribus rubris. *The red Scotch Rose.*

Rosa Damascena. Park. Parad. *The Damask Rose.*

Rosa Provincialis five Hollandica Damascena. Park. Parad. *The Damask Provence Rose.*

Rosa Provincialis major, flore pleno ruberrimo. Boerh. Ind. alt. *The large red Provence Rose.*

Rosa centifolia Batavica. Cluf. Hist. *The Dutch hundred-leav'd Rose.*

Rosa Provincialis spinosissima, pedunculo muscoso. Boerh. Ind. *The moss Provence Rose.*

Rosa Provincialis rubra. Park. Parad. *The common Provence Rose.*

Rosa holosericea simplex. Park. Parad. *The single velvet Rose.*

Rosa holosericea multiplex. Park. Parad. *The double velvet Rose.*

Rosa odore cinnamomi, flore pleno. C. B. P. *The double cinnamon Rose.*

Rosa odore cinnamomi, simplex. C. B. P. *The single cinnamon Rose.*

Rosa lutea simplex. C. B. P. *The single yellow Rose.*

Rosa lutea multiplex. C. B. P. *The double yellow Rose.*

Rosa sylvestris Austriaca, flore phœnicio. Park. Theat. *The Austrian Rose.*

Rosa sylvestris Austriaca, flore luteo. *The yellow Austrian Rose.*

Rosa uno ramo luteos, cæteris puniceos flores gerens simplices. Boerh. Ind. *The Austrian Rose, bearing yellow Flowers on one Branch, and scarlet on the other.*

V. L. II.

Rosa alba vulgaris major. C. B. P. *The common white Rose.*

Rosa alba minor. C. B. P. *The smaller white Rose.*

Rosa candida semiplena. J. B. *The semi-double white Rose.*

Rosa incarnata. Park. Parad. *The blush Rose.*

Rosa Prænestina variegata plena. Hort. Eyf. *The York and Lancaster Rose.*

Rosa rubro & albo variegata, rosa mundi vulgo dicta. Raii Hist. *The Rose of the World.*

Rosa Francofurtensis. Park. Parad. *The Francfort Rose.*

Rosa sempervirens. Park. Parad. *The Evergreen Rose.*

Rosa omnium calendarum. H. R. Par. *The monthly Rose.*

Rosa omnium calendarum, flore variegato. *The striped monthly Rose*

Rosa sine spinis, flore minore. C. B. P. *The Rose without Thorns.*

Rosa sine spinis, flore majore ruberrimo. *The Royal Virgin Rose.*

Rosa sylvestris Virginienfis. Raii Hist. *The wild Virginia Rose.*

Rosa moschata, simplici flore. C. B. P. *The single musk Rose.*

Rosa moschata, flore pleno. C. B. P. *The double musk Rose.*

Rosa moschata sempervirens. C. B. P. *The Evergreen musk Rose.*

Rosa Belgica five vitrea, flore rubro. Rea. Flor. *The red Belgic Rose.*

Rosa Belgica five vitrea, flore rubicante. Rea. Flor. *The blush Belgic Rose.*

Rosa marmorea. Rea. Flor. *The marbled Rose.*

Rosa Damascena, flore simplici. *The single Damask Rose.*

Rosa sylvestris Virginiana, flore majore pallido. *The wild Virginia Rose, with a large pale Flower.*

Rosa Americana moschata, flore minore. *The small American musk Rose.*

Rosa Americana odoratissima serotina, flore pallido pleno. *The most sweet late-flowering American Rose, with a pale double Flower.*

Rosa campestris, spinis carens, biflora. C. B. P. *The wild Virgin Rose, which flowers twice a Year.*

Rubus vulgaris major, fructu nigro. J. B. *The common Bramble or Blackberry.*

Rubus minor, fructu cœruleo. J. B. *The dwarf Bramble or Dewberry.*

Rubus vulgaris major, fructu albo. Raii Syn. *The Bramble with white Fruit.*

Rubus vulgaris, spinis carens. H. R. Par. *The smooth Bramble.*

Rubus flore albo pleno. H. R. Par. *The Bramble with double white Flowers.*

Rubus Idæus spinosus, fructu rubro. J. B. *The Raspberry-bush.*

Rubus Idæus spinosus, fructu albo. J. B. *The Raspberry with white Fruit.*

Rubus Idæus spinosus, fructu rubro serotino. *The late red Raspberry.*

T t t t

Rubus

A D D E N D A.

Rubus Idæus, fructu nigro, Virginianus. Banist. *The Virginian Raspberry, with black Fruit.*

Rubus Americanus magis erectus, spinis rarioribus, stipite cœruleo. Pluk. Alm. *The American Raspberry with blue Stems.*

Rubus odoratus. Cornut. *Virginian flowering Raspberry.*

Rubus Alpinus humilis. J. B. *Dwarf Bramble of the Alps.*

Rubus spinosus, foliis & flore eleganter lacinatis. Inst. R. H. *The common Bramble, with Leaves and Flower curiously jagged.*

Rubus non spinosus, fructu nigro majore, Polonicus. Barr. Icon. *The Poland smooth Bramble, with a large black Fruit.*

Salix folio longissimo angustissimo utrinque albido. C. B. P. *The white Sallow, with very long narrow Leaves.*

Salix humilis angustifolia. C. B. P. *The dwarf narrow-leav'd Willow.*

Salix oblongo incano acuto folio. C. B. P. *The Willow with an oblong hoary pointed Leaf.*

Salix fragilis. C. B. P. *The crack Willow.*

Salix subrotundo argenteo folio. C. B. P. *Round silver-leav'd Willow.*

Salix humilis latifolia erecta. C. B. P. *The upright broad-leav'd dwarf Willow.*

Salix latifolia repens. C. B. P. *The broad-leav'd creeping Willow.*

Salix pumila Alpina rotundifolia repens, infernè subcinerea. C. B. P. *Low round-leav'd creeping Willow of the Alps, whose Leaves are ash-coloured on their Under-side.*

Salix pumila, folio rotundo. J. B. *Low round-leav'd Willow.*

Salix Alpina, alni rotundo folio, repens. Bocc. Mus. *The creeping Willow of the Alps, with a round Alder-leaf.*

Salix pumila, folio utrinque glabro. J. B. *Low Willow, with smooth Leaves.*

Salix pumila latifolia incana. C. B. P. *Low Willow, with a broad hoary Leaf.*

Salix pumila linifolia incana. C. B. P. *Low Willow, with a hoary flax Leaf.*

Salix pumila, brevi angustoque folio incano. C. B. P. *Low Willow, with a short narrow hoary Leaf.*

Salix Alpina angustifolia repens non incana. C. B. P. *Creeping narrow-leav'd green Willow.*

Sambucus racemosa rubra. C. B. P. *Red berried mountain Elder.*

Spartium tertium, flore albo. C. B. P. *White Spanish Broom.*

Spartium alterum monospermum, semine reni simile. C. B. P. *Another yellow Spanish Broom, with one Seed in each Pod.*

Spiræa falicis folio. Inst. R. H. *Spiræa frutex, vulgò.*

Spiræa opuli folio. Inst. R. H. *Virginia Guelder-rose, vulgò.*

Spiræa hyperici folio non crenato. Inst. R. H. *Hypericum frutex, vulgò.*

Spiræa Hispanica, hyperici folio crenato. Inst. R. H. *Hypericum frutex with notch'd Leaves, vulgò.*

Staphylodendron. Matth. *The Bladder-nut.*

Staphylodendron Virginianum trifoliatum. H. L. *The three-leav'd Virginian Bladder-nut.*

Syringa alba, five Philadelphus Athenæi. C. B. P. *The Syringa or mock Orange.*

Syringa flore albo pleno. C. B. P. *The Syringa with a double Flower.*

Thymelæa lauri folio deciduo, five laureola fœmina. Inst. R. H. *The purple flowering Mezereon.*

Thymelæa lauri folio deciduo, flore albido, fructu flavescente. Inst. R. H. *The white flowering Mezereon.*

Thymelæa lauri folio deciduo, flore rubente. *The Mezereon, with pale red Flowers.*

Thymelæa foliis lini. C. B. P. *Spurge Olive, with Flax-leaves.*

Toxicodendron triphyllum glabrum. Inst. R. H. *Smooth three-leav'd Poison-oak.*

Toxicodendron triphyllum, folio sinuato pubescente. Inst. R. H. *Three-leav'd Poison-oak, with a downy indented Leaf.*

Toxicodendron rectum, foliis minoribus glabris. Hort. Elth. *Upright Poison-oak, with smaller smooth Leaves.*

Toxicodendron rectum pentaphyllum glabrum, foliis latioribus. *Five-leav'd upright Poison-oak, with broad smooth Leaves.*

Toxicodendron foliis alatis, fructu rhomboide. Catesb. Hist. *The Poison-ash.*

Viburnum. Matth. *The Way-faring, or Pliant Mealy-tree.*

Viburnum Carolinianum, floribus purpureiscentibus ex foliorum alis. *Carolina Way-faring-tree, with purplish Flowers coming out from the Wings of the Leaves.*

Vitis Idæa magna quibusdam, five myrtilus grandis. J. B. *The great Bilberry.*

Vitis Idæa, foliis oblongis crenatis, fructu nigricante. C. B. P. *Black Whorts, or Whortleberry.*

Vitex latiore folio. C. B. P. *The broad-leav'd Chaste-tree.*

Vitex foliis angustioribus, cannabis modo dispositis. C. B. P. *The narrow-leav'd Chaste-tree.*

Vitex foliis angustioribus, cannabis modo dispositis, floribus cœruleis. H. L. Bat. *Narrow-leav'd Chaste-tree, with blue Flowers.*

Vitex five agnus, flore albido. H. R. Par. *The Chaste-tree with white Flowers.*

Vitex five agnus minor, foliis angustissimis. H. R. Par. *The lesser Chaste-tree, with very narrow Leaves.*

Xanthoxylum spinosum, lentisci longioribus foliis, euonymi fructu capsulari, ex insula Jamaicensi. Pluk. Phyt. *The Pellitory, or Tooth-ach-tree.*

A D D E N D A.

A CATALOGUE of HARDY DECIDUOUS TREES and SHRUBS, with variegated Leaves.

AS the Variegation, in the Leaves of Trees and Shrubs, proceeds from a Distemper in the Plants, so it weakens them, and renders them of less Growth than those whose Leaves are plain; for which Reason I omitted inserting them in the former Catalogue: but as there are many Persons who are curious in collecting of all the Sorts of strip'd Trees and Shrubs, so for their Instruction I have put them down in a separate List, which may be with more Ease consulted, than if they had been distributed in the general Catalogue. In this I shall not observe the Method of the former, in ranging of them according to their several Growths; since the former Catalogue will be a sufficient Instruction to any Person who is inclinable to make a separate Plantation of these Trees; for it is but consulting the Height of the same Sorts of Trees and Shrubs, which have plain Leaves, and ranging these accordingly.

Acer majus, foliis eleganter variegatis. Hort. Edin. *The strip'd Sycamore.*

Acer platanoides, foliis eleganter variegatis. *The strip'd Norway Maple.*

Acer campestre & *minus*, foliis variegatis. *The strip'd Maple.*

Armeniaca malus, fructu majore, foliis ex luteo variegatis. *The Apricock with strip'd Leaves.*

Carpinus foliis ex luteo variegatis. *The strip'd Hornbeam.*

Caprifolium non perfoliatum, foliis sinuosis & variegatis. *The wild Honeysuckle, with indented strip'd Leaves.*

Caprifolium perfoliatum, foliis variegatis. *The strip'd Italian Honeysuckle.*

Castanea sativa, foliis eleganter variegatis. *The strip'd Chestnut-tree.*

Celtis orientalis minor, foliis minoribus & crassioribus, fructu flavo, foliis ex luteo variegatis. *The eastern Nettle-tree, with strip'd Leaves.*

Cerasus hortenſis, foliis eleganter variegatis. *The strip'd-leav'd Cherry-tree.*

Cornus foemina, foliis variegatis. H. L. *The Dogwood with strip'd Leaves.*

Cytisus Alpinus latifolius, flore racemoso pendulo, foliis variegatis. Inst. R. H. *The strip'd-leav'd Viburnum.*

Euonymus vulgaris, granis rubentibus, foliis variegatis. *The Spindle-tree with strip'd Leaves.*

Fagus foliis variegatis. *The strip'd-leav'd Beech-tree.*

Fraxinus vulgaris, foliis ex luteo variegatis. *The strip'd Ash.*

Frangula foliis variegatis. *The strip'd berry-bearing Alder.*

Grossularia hortenſis, foliis ex luteo variegatis. *The yellow-strip'd Gooseberry.*

Grossularia hortenſis, foliis ex albo variegatis. *The white-strip'd Gooseberry.*

Hippocastanum vulgare, foliis ex luteo variegatis. *The yellow-strip'd Horse Chestnut-tree.*

Hippocastanum vulgare, foliis ex albo variegatis. *The white-strip'd Horse Chestnut.*

Jasminum vulgatum, flore albo, foliis ex luteo elegantissime variegatis. *The gold-strip'd Jasmine.*

Jasminum vulgatum, flore albo, foliis ex albo elegantissime variegatis. *The silver-strip'd Jasmine.*

Ketmia Syrorum, foliis ex albo eleganter variegatis. *Althaea frutex with strip'd Leaves.*

Ligustrum foliis ex luteo variegatis. H. R. Par. *Yellow-strip'd Privet.*

Ligustrum foliis argentatis. Breyn. prod. *Silver-strip'd Privet.*

Lilac flore albo, foliis ex luteo variegatis. *The white Lilac, with yellow-strip'd Leaves.*

Lilac flore albo, foliis ex albo variegatis. *The white Lilac, with white-strip'd Leaves.*

Malus sylvestris, foliis ex albo eleganter variegatis. *The Crab-tree with strip'd Leaves.*

Malus sativa, foliis eleganter variegatis. *The Apple-tree with strip'd Leaves.*

Nux

A D D E N D A.

Nux juglans five regia vulgaris, foliis ex luteo variegatis. *The Walnut-tree with strip'd Leaves.*

Opulus flore globoso, foliis variegatis. *The Guelder-rose with strip'd Leaves.*

Populus alba, majoribus foliis variegatis. *The strip'd Abele-tree.*

Populus alba, folio minore variegato. *The strip'd white Poplar.*

Prunus fructu nigro, carne durâ, foliis eleganter variegatis. *The strip'd Perdrigon-plum.*

Pyrus sativa, foliis eleganter variegatis. *The Pear-tree with strip'd Leaves.*

Quercus vulgaris, foliis ex albo variegatis. *The Oak-tree, with strip'd Leaves*

Ribes vulgaris, foliis ex albo variegatis. *The Currant with white strip'd Leaves.*

Ribes fructu albo, foliis ex luteo variegatis. *The red Currant with yellow strip'd Leaves.*

Rosa pumila spinosissima, foliis pimpinellæ glabris ex luteo & viridi eleganter variegatis. *The strip'd burnet-leav'd Rose.*

Rubus vulgaris major, folio variegato. *The strip'd-leav'd Bramble.*

Salix latifolia rotunda variegata. *The strip'd Osier.*

Sambucus humilior frutescens, foliis eleganter variegatis. H. Edin. *The dwarf strip'd Elder.*

Sambucus vulgaris, foliis ex luteo variegatis. *The blotch'd Elder.*

Sorbus sylvestris, foliis ex luteo variegatis. *The Quickbeam with strip'd Leaves.*

Syringa foliis ex luteo variegatis. *The strip'd Syringa or mock Orange.*

Thymelæa lauri folio deciduo, foliis ex albo variegatis. *Mezereon with strip'd Leaves.*

Tilia foemina, folio majore variegato. *The Lime-tree with strip'd Leaves.*

Viburnum folio variegato. *The strip'd Viburnum, or Pliant Mealy-tree.*

Ulmus minor, folio variegato. *The strip'd English Elm.*

Ulmus folio glabro, eleganter variegato. *The strip'd Witch-elm.*

Ulmus major Hollandica, angustis & magis acuminatis samarris, folio latissimo scabro variegato. *The strip'd Dutch Elm.*

Ulmus minor, foliis flavescentibus. *The yellow-leav'd Elm.*

A CATALOGUE of CLIMBING SHRUBS, which should be planted against TREES, whereby they may climb, or must be supported by Stakes, or a Wall, &c.

Bignonia Americana, fraxini folio, flore amplo phœnicio. Inst. R. H. *The common Trumpet-tree.*

Bignonia Americana minor, fraxini folio, flore coccineo. Catesb. Hist. *The lesser Trumpet-tree, with a scarlet Flower.*

Bignonia Americana, capreolis donata, siliquâ breviori. Inst. R. H. *American Trumpet-tree, having Claspers, and a short Pod.*

Clematitis sylvestris latifolia. C. B. P. *Travellers-joy.*

Clematitis sylvestris latifolia, foliis non incis. Inst. R. H. *Broad whole-leav'd Travellers-joy.*

Clematitis peregrina, foliis pyri incis. C. B. P. *Spanish Travellers-joy.*

Clematitis cœrulea, vel purpurea repens. C. B. P. *Virgins Bower.*

Clematitis cœrulea, flore pleno. C. B. P. *The double Virgins Bower.*

Clematitis purpuro-cœrulea, flore pleno. C. B. P. *Purple double Virgins Bower.*

Clematitis Canadensis trifolia dentata, flore albo. H. R. Par. Canada *Virgins Bower, with a trifoliated indented Leaf, and a white Flower.*

Clematitis purpurea repens, petalis florum coriaceis. Banist. *Creeping American Travellers-joy, with a purple Flower, and thick strong Petals.*

Frutex scandens, petroselinii foliis, Virginianus, claviculis donatus. Pluk. Ma. *The Pepper-tree, vulgò.*

Frutex scandens Americanus, foliis latis alternatim sitis, fructu euonymi. *Climbing American Spindle-tree.*

Granadilla pentaphyllos, flore cœruleo magno. Boerh. Ind. alt. *The broad-leav'd Passion-flower.*

Granadilla pentaphyllos, angustioribus foliis, flore minore pallide cœruleo. *The narrow-leav'd Passion-flower, with a smaller paler Flower.*

Grana-

A D D E N D A

Granadilla Hispanis, flos passionis Italis. Col. in Rech. *Three-leav'd Passion-flower.*

Granadilla folio tricuspidato, flore parvo flavescente. Inst. *The Passion with a small yellow Flower.*

Hedera arborea. C. B. P. *Common Ivy.*

Hedera arborea, foliis cymis flavescens. *The Ivy with yellow Leaves.*

Hedera communis minor, foliis ex albo & viridi variis. Boerh. Ind. alt. *The silver-strip'd Ivy.*

Hedera communis minor, foliis ex luteo variegatis. *The yellow-strip'd Ivy.*

Jasminum vulgatius, flore albo. C. B. P. *The common white Jasmine.*

Jasminum humile luteum. C. B. P. *The yellow Italian Jasmine, vulgò.*

Jasminum luteum, vulgò dictum bacciferum. C. B. P. *The common yellow Jasmine.*

Jasminum humilius, magno flore. C. B. P. *The Spanish Jasmine.*

Menispermum Canadense scandens, hederaceo folio. Act. R. Par. *Climbing Canada Moonseed, commonly called Canada Ivy.*

Menispermum Canadense scandens, umbilicato folio. Act. R. Par. *Climbing Canada Moonseed, with an umbilicated Leaf.*

Menispermum folio hederaceo. Hort. Elth. *Carolina Moonseed.*

Periclymenum perfoliatum Virginianum, sempervirens & florens. H. L. *Virginian Trumpet-bonesuckle.*

Phaseoloides frutescens Caroliniense, foliis pinnatis, floribus cœruleis spicatis. *The Carolina Kidney-bean-tree.*

Toxicodendron amplexicaule, foliis minoribus glabris. Hort. Elth. *Creeping Poison-oak.*

Vitis sylvestris labrusca. C. B. P. *The wild Grape.*

Vitis laciniatis foliis. Cornut. *The Parsley-leav'd Grape.*

Vitis sylvestris Virginiana. Park. Theat. *The wild Virginia Grape.*

Vitis vulpina dicta, Virginiana alba. Pluk. Alm. *The Fox Grape.*

Vitis quinquefolia Canadensis scandens. Inst. R. H. *The Virginia Creeper.*

A CATALOGUE of such EVER-GREEN TREES and SHRUBS, as will thrive in the open Air in England; ranged according to their several Growths.

The LARGEST GROWING TREES.

ABIES taxi folio, fructu sursum spectante. Inst. R. H. *The Silver or Yew-leav'd Fir.*

Abies tenuiori folio, fructu deorsum inflexo. Inst. R. H. *The Norway or Spruce Fir.*

Abies foliis prælongis, pinum simulans. Raii Hist. *The long-leav'd Fir.*

Abies piceæ foliis brevioribus, conis parvis biuncialibus laxis. Rand. *The white Spruce Fir of America.*

Abies taxi folio, subtus argenteo, fructu longissimo deorsum inflexo. *The long-con'd Cornish Fir, vulgò.*

Abies taxi foliis, odore balsami Gileadenfis. Raii Hist. *The Balm of Gilead Fir.*

Abies maxima Sinensis, pectinatis taxi foliis, apiculis non spinosis. Pluk. *The greatest China Fir, with Yew-leaves.*

Cedrus magna, five Libani, conifera. J. B. *The Cedar of Libanus.*

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Ilex oblongo ferrato folio. C. B. P. *The ever-green Oak with an oblong saw'd Leaf.*

Ilex folio rotundiore molli, modiceque sinuato, five smilax Theophrasti. C. B. P. *The ever-green Oak with a rounder Leaf a little indented.*

Magnolia altissima, laurocerasi folio amplissimo, flore ingenti candido. Catesb. Hist. *The great laurel-leav'd Tulip-tree.*

Pinus fativa. C. B. P. *The manured Pine.*

Pinus sylvestris. C. B. P. *The wild Pine or Pinafter.*

Pinus sylvestris, foliis brevibus glaucis, conis parvis albescentibus. Raii Hist. *The Scotch Pine, commonly called the Scotch Fir.*

Pinus sylvestris montana tertia. C. B. P. *The third wild mountain Pine.*

U u u u

Pinus

A D D E N D A.

Pinus sylvestris montana altera. C. B. P. *Another wild mountain Pine.*

Pinus Americana, foliis prælongis, subinde ternis, conis plurimis confertim nascentibus. Rand. *The cluster Pine.*

Pinus conis erectis. Inst. R. H. *The Pine-tree with erect Cones.*

Pinus Hierosolymitana, prælongis & tenuissimis viridibus setis. Pluk. Alm. *The Aleppo Pine, vulgò.*

Pinus Virginiana, prælongis foliis tenuioribus, cono echinato. Pluk. Alm. *Virginia Pine, with long narrow Leaves, and a prickly Cone.*

Pinus Americana, ex uno folliculo setis longis tenuibus triquetris, ad unum angulum per totam longitudinem, minutissimis crenis asperatis. Pluk. Alm. *Lord Weymouth's Pine, vulgò.*

Pinus sylvestris maritima, conis firmiter ramis adhærentibus. J. B. *The wild maritime Pine, whose Cones closely adhere to the Branches.*

Quercus latifolia, perpetuò virens. C. B. P. *Broad-leav'd ever-green Oak.*

Quercus latifolia, subtus argentea, glande minore, calyce hispido. *The Nottingham Oak, vulgò.*

Suber latifolium perpetuò virens. C. B. P. *The Cork-tree with broad Leaves.*

Suber angustifolium, non ferratum. C. B. P. *The narrow-leav'd Cork-tree.*

Trees of middling Growth.

ABIES minor, pectinatis foliis, Virginiana, conis parvis subrotundis. Pluk. *The Yew-leav'd Virginia Fir with small roundish Cones.*

Abies picea foliis brevibus, conis minimis. Rand. *The red Spruce Fir, vulgò.*

Abies pectinatis foliis, Americana, conis parvis laxis. *The Hemlock Fir.*

Abies orientalis, folio brevi & tetragono, fructu minimo deorsum inflexo. Tourn. Cor. *Eastern Fir, with a short four-corner'd Leaf, and a small Fruit hanging downward.*

Alaternus. Clus. Hist. *The common Alaternus.*

Alaternus Hispanica latifolia. C. B. P. *The broad-leav'd Spanish Alaternus.*

Aquifolium baccis rubris. H. L. *The common Holly-tree.*

Arbutus folio serrato. C. B. P. *The Strawberry-tree.*

Arbutus fructu turbinato, folio serrato. Inst. R. *Strawberry-tree with a rounder Fruit.*

Arbutus folio serrato, flore oblongo, fructu ovato. D. Michel. *The Strawberry-tree with an oblong Flower, and an egg-shap'd Fruit.*

Arbutus folio serrato, flore duplici. *The Strawberry-tree with a double Flower.*

Cedrus folio cupressi, major, fructu flavescente. C. B. P. *The greater berry-bearing Cedar, with yellow Fruit.*

Cedrus Hispanica procerior, fructu maximo nigro. Inst. R. H. *Spanish berry-bearing Cedar, with the largest black Fruit.*

Cupressus metâ in fastigium convolutâ, quæ fœmina Plinii. Inst. R. H. *The common or upright Cypress.*

Cupressus ramos extra se spargens, quæ mas Plinii. Inst. R. H. *The Male spreading Cypress.*

Ilex folio angusto, non serrato. C. B. P. *The olive-leav'd Ilex.*

Ilex folio agrifolii. Bot. Monsp. *The Ilex with a Holly-leaf.*

Juniperus major, baccâ rufescente. C. B. P. *The greater Juniper, with a brown Berry.*

Juniperus Virginiana, foliis inferioribus juniperinis, superioribus sabinam vel cupressum referentibus. Boerh. Ind. alt. *The Virginia Cedar, with the lower Leaves like Juniper, and the upper Leaves like Savin.*

Juniperus Bermudiana. H. L. *The Bermudas Cedar.*

Juniperus Virginiana, folio ubique juniperino. Boerh. Ind. alt. *The Virginia Juniper, or Cedar with the whole Leaves like Juniper.*

Laurus vulgaris. C. B. P. *The common Bay.*

Laurus vulgaris, flore pleno. H. R. Monsp. *The Bay-tree with a double Flower.*

Laurus vulgaris, folio undulato. H. R. Par. *The common Bay, with a waved Leaf.*

Laurus latifolia, Dioscoridis. C. B. P. *The broad-leav'd Bay.*

Laurocerasus. Clus. Hist. *The Laurel-tree.*

Phillyrea latifolia lævis. C. B. P. *The broad-leav'd smooth Phillyrea.*

Phillyrea latifolia spinosa. C. B. P. *The broad-leav'd prickly Phillyrea.*

Pinus maritima minor. C. B. P. *The small maritime Pine.*

Pinus humilis, iulis virescentibus, aut pallescentibus. Inst. R. H. *Dwarf Pine, with greenish and pale Katkins.*

Pinus humilis, iulo purpurascente. Inst. R. H. *Dwarf Pine, with a purple Katkin.*

Pinus orientalis, foliis durioribus amaris, fructu parvo peracuto. Inst. Cor. *Eastern Pine with hard bitter Leaves, and a small pointed Cone.*

Pinus Virginiana, tripilis sternis plerumque ex uno folliculo setis, strobilis major. Pluk. Alm. *The Frankincense-Tree.*

Pinus Virginiana, binis brevioribus & crassioribus setis, minori cono, singulis squamarum capitibus aculeo donatis. Pluk. Alm. *The Jersey Pine, vulgò.*

Quercus sempervirens, foliis oblongis non sinuatis. Banist. *The American live Oak.*

Taxus. J. B. *The Yew-Tree.*

The Third Growth of Ever-green Trees.

ALTERNUS seu Phyllica, foliis angustioribus & profundius ferratis. H. L. *The narrow sawed-leav'd Alaternus.*

Alaternus

A D D E N D A.

Alaternus minore folio. Inst. R. H. *The small-leaved Alaternus.*

Aquifolium baccis luteis. H. L. *The yellow-berried Holly.*

Aquifolium baccis albis. *The white-berried Holly.*

Aquifolium echinata folii superficie. Corn. *The hedge-hog Holly.*

Aquifolium foliis parvis, interdum vix spinosis. *The Fagshot Holly.*

Aquifolium Caroliniense, foliis dentatis, baccis rubris. Catesb. Hist. *The Daboon Holly.*

Buxus arborescens. C. B. P. *The common Box-tree.*

Buxus arborescens angustifolia. *The narrow-leav'd Box-tree.*

Buxus longioribus foliis, in acumen luteum definitibus. H. R. Par. *The Box-tree with longer Leaves terminating in yellow Points.*

Cedrus folio cupressi, media, majoribus baccis. C. B. P. *The middle berry-bearing Cedar, with large Berries.*

Cerasi similis arbuscula Mariana, pædi folio, flore albo parvo racemoso. Pluk. Mant. *The Maryland Bird-cherry, with black Fruit.*

Cupressus Lusitanica patula, fructu minore. Inst. R. H. *Spreading Portugal Cypress, with a smaller Fruit.*

Euonymus Virginianus, pyracanthæ foliis, sempervirens, capsulâ verrucarum instar asperata rubente. Pluk. Phyt. *The ever-green Spindle-tree of America.*

Juniperus vulgaris, arbor. C. B. P. *The Swedish Juniper.*

Juniperus major, baccâ cœruleâ. C. B. P. *The greater Juniper, with blue Berries.*

Magnolia amplissimo flore albo, fructu cœruleo. Plum. *The Umbrella-tree.*

Olea maximo fructu. Inst. R. H. *The Spanish Olive-tree.*

Olea fructu oblongo atro-virente. Inst. R. H. *The Olive-tree with oblong deep-green Fruit.*

Olea fructu albo. Inst. R. H. *Olive-tree with white Fruit.*

Olea fructu majusculo & oblongo. Inst. R. H. *Olive-tree with large oblong Fruit.*

Olea fructu majori, carne crassâ. Inst. R. H. *The Royal Olive-tree.*

Olea maxima subrotunda. H. R. Monsp. *The largest round Olive.*

Olea sylvestris, folio duro, subtus incano. C. B. P. *The wild Olive.*

Phillyrea folio leviter ferrato. C. B. P. *The true Phillyrea, with Leaves lightly sawed.*

Phillyrea angustifolia prima. C. B. P. *The narrow-leav'd Phillyrea.*

Phillyrea angustifolia secunda. C. B. P. *The second narrow-leav'd Phillyrea.*

Phillyrea folio ligustri. C. B. P. *The privet-leav'd Phillyrea.*

Phillyrea oleæ Ephesiæ folio. Pluk. Phyt. *The olive-leav'd Phillyrea.*

Phillyrea angustifolia spinosa. H. R. Par. *Narrow-leav'd prickly Phillyrea.*

Phillyrea longiore folio, profundè crenato. H. R. Par. *Long-leav'd Phillyrea, with a deeply notch'd Leaf.*

Phillyrea folio buxi. H. R. Par. *The box-leav'd Phillyrea.*

Phillyrea Hispanica, lauri folio ferrato & aculeato. Inst. R. H. *Spanish Phillyrea, with a sawed and prickly Bay-leaf.*

Phillyrea Hispanica, nerii folio. Inst. R. H. *Spanish Phillyrea, with an Oleander-leaf.*

Tamariscus Narbonensis. Lob. Icon. *The narrow-leav'd Tamarisk.*

Tamariscus Germanicus. Lob. Icon. *The German Tamarisk.*

Thuya Theophrasti. C. B. P. *The Arbor Vitæ, vulgè.*

ACATALOGUE of EVER-GREEN SHRUBS, which will thrive in the open Air in England.

BUPLEURUM arborescens, salicis folio. Inst. R. H. *Seseli Æthiopicum frutex.*

Caprifolium perfoliatum sempervirens, floribus speciosis. *The ever-green Honeysuckle.*

Cassine vera Floridanorum, arbuscula baccifera, alaterni fermè facie, foliis alternatim

fitis, tetrapylene. Pluk. Mant. *Ever-green Cassine, or South-Sea Thea.*

Chamaelea tricoccos. C. B. P. *The Widow-wail.*

Chamærhododendron Ponticum maximum, folio laurocerasi, flore è cœruleo purpurascente. *The Pontic Rose-bay with a Laurel-leaf, and a blue purplish Flower.*

Chamæ-

A D D E N D A.

Chamaerhododendron Americanum, lauro-cerasi folio, floribus albis. American Rose-bay, with a Laurel-leaf, and white Flowers.

Cytiso-genista scoparia vulgaris, flore luteo. Inst. R. H. *The common Broom.*

Cytiso-genista scoparia vulgaris, flore albo. Inst. R. H. *The common Broom, with a white Flower.*

Cytisus spinosus. H. L. *Thorny Cytisus.*

Genista-spartium spinosum majus primum, flore luteo. C. B. P. *The French Furz or Whin.*

Genista-spartium spinosum majus secundum, flore pallido. C. B. P. *The Furz or Whin, with a pale Flower.*

Genista-spartium spinosum majus tertium hirsutum. C. B. P. *Hairy Furz or Whin.*

Genista-spartium majus, brevioribus & longioribus aculeis. C. B. P. *The common Furz or Whin.*

Genista-spartium minus Anglicum. Inst. R. H. *The smaller English Furz or Whin.*

Hedera arborea. C. B. P. *Common Ivy.*

Ilex aculeata cocciglandifera. C. B. P. *The Kermes, or Holm-oak.*

Ilex media coccigeræ ilici plane suppar, folio aquifoliae. Lob. Ad. *Small Shrub ever-green Oak.*

Juniperus vulgaris fruticosa. C. B. P. *The common Juniper.*

Juniperus minor montana, folio latiore, fructuque longiore. C. B. P. *Smaller mountain Juniper, with a broader Leaf, and a longer Fruit.*

Laurocerasus Lusitanica minor. Inst. R. H. *The small Portugal Laurel, commonly called Portugal Cherry.*

Laurustinus Virginiana, floribus albidis eleganter bullatis. D. Banister. *Ivy flowering Winter-green.*

Magnolia lauri folio, subtus albicante. Carterb. Hist. *The small laurel-leaf'd Tulip-tree, or sweet Bay.*

Mespilus spinosa, pyri folio. H. L. *The Pyracantha, or ever-green Thorn.*

Myrtus latifolia Romana. C. B. P. *Common broad-leaf'd Myrtle.*

Myrtus flore pleno. Corn. *The double-flowering Myrtle.*

Myrtus communis Italica. C. B. P. *Common Italian Myrtle.*

Olea fructu oblongo minori. Inst. R. H. *The Olive-tree, with small oblong Fruit.*

Olea fructu minore & rotundiore. Inst. R. H. *The Olive-tree, with smaller and rounder Fruit.*

Olea minor rotunda racemosa. H. R. Par. *The small Olive-tree, with round Fruit growing in Clusters.*

Olea minor rotunda rubro-nigricans. H. R. Par. *The small Olive-tree, with round dark-red Fruit.*

Olea minor Lucensis, fructu odorato. Inst. R. H. *The Luca Olive-tree.*

Olea Africana, folio buxi crasso atro-viridi lucido, cortice albo scabro. Boerh. Ind. alt. *The African box-leaf'd Olive.*

Rosmarinus hortenensis, latiore folio. Mor. Hist. *The broad-leaf'd Garden Rosemary.*

Rosmarinus hortenensis, angustiore folio. C. B. P. *The narrow-leaf'd Garden Rosemary.*

Ruscus myrtifolius aculeatus. Inst. R. H. *The Butchers-broom, or Kneebolm.*

Ruscus myrtifolius aculeatus, folio angustiore. *Narrow-leaf'd Butchers-broom, or Kneebolm.*

Ruscus vulgaris, folio ampliore. Hort. Pis. *Broader-leaf'd Butchers-broom, or Kneebolm.*

Ruscus latifolius, fructu folio innascente. Inst. R. H. *Broad-leaf'd Alexandrian Laurel, with the Fruit growing on the Leaf.*

Ruscus angustifolius, fructu folio innascente. Inst. R. H. *Narrow-leaf'd Alexandrian Laurel, with the Fruit growing on the Leaf.*

Ruscus angustifolius, fructu summis ramulis innascente. Inst. R. H. *Narrow-leaf'd Alexandrian Laurel, with the Fruit growing on the Tops of the Branches.*

Sabina folio tamarisci Dioscoridis. C. B. P. *The Savin.*

Sabina folio cypressi. C. B. P. *The cypress-leaf'd Savin.*

Senecio Virginianus arborefcens, atriplicis folio. Par. Bat. *The Groundsel-tree.*

Thymelæa laurifolia sempervirens, seu laureola mas. Inst. R. H. *The Spurge-laurel.*

Thymelæa Alpina linifolia humilior, flore purpureo odoratissimo. Inst. R. H. *The Cneorum of Matthioli.*

Tinus prior. Clus. Hist. *The Bastard shining-leaf'd Laurustinus.*

Tinus alter. Clus. Hist. *The rough-leaf'd Laurustinus.*

Tinus tertius. Clus. Hist. *The small-leaf'd Laurustinus.*

Tinus prior Clusii, folio atroviridi splendente. *The shining-leaf'd Laurustinus.*

Vermicularis frutex major. Ger. Emac. *The stone Crop-tree.*

Vitis Idæa sempervirens, fructu rubro. J. B. *Red Whorts, or Whortle-berries.*

Vitis Idæa Caroliniana, foliis subrotundis hirsutis ex adverso nascentibus, floribus minimis herbaceis, fructu parvo rubello. St. Peters-wort Shrub, vulgo.

Uva Urli. Clus. Hist. *Spanish red Whort.*

A D D E N D A.

A CATALOGUE of EVER-GREEN TREES and SHRUBS, with variegated Leaves.

Alaternus aurea, seu foliis ex luteo variegatis. H. R. Par. *The blotch'd Alaternus, commonly called blotch'd Phillyrea.*

Alaternus argentea, seu foliis ex albo variegatis. H. R. Par. *The silver-blotch'd Alaternus.*

Alaternus foliis angustioribus & profundius ferratis, limbis argenteis. *The silver-edg'd narrow-leav'd Alaternus.*

Alaternus foliis angustioribus & profundius ferratis, limbis aureis. *The gold-edged Alaternus.*

Aquifolium foliis ex albo variegatis. H. L. *The silver-strip'd Holly.*

Aquifolium foliis ex luteo variegatis. H. R. Par. *The yellow-blotch'd Holly.*

Aquifolium echinata folii superficie, foliis ex luteo variegatis. *The hedge-hog Holly, with yellow-strip'd Leaves.*

Aquifolium echinata folii superficie, foliis ex albo variegatis. *The silver-strip'd hedge-hog Holly.*

Aquifolium foliis longioribus, limbis & spinis ex unico tantum latere per totum argenteo pictis. Pluk. Broderick's Holly, vulgo.

Aquifolium foliis subrotundis, limbis & spinis utrinque argentatis, aquifolium elegans. D. Doct. Eales. Pluk. Alm. Eales's Holly.

Aquifolium foliis oblongis lucidis, spinis & limbis argenteis. Sir Thomas Franklin's Holly.

Aquifolium foliis subrotundis, limbis argenteis, spinulis & marginalibus purpurascens. Bridgman's Holly.

Aquifolium foliis oblongis, spinis & limbis flavescentibus. Longstaff's best Holly.

Aquifolium foliis & spinis majoribus, limbis flavescentibus. Fine Phyllis.

Aquifolium foliis minoribus, spinis & limbis argenteis. Painted Lady-holly.

Aquifolium foliis angustioribus, spinis & limbis flavescentibus. Fuller's Cream-holly.

Aquifolium foliis oblongis, ex luteo & aureo elegantissime variegato. *The milk-maid Holly.*

Aquifolium foliis oblongis viridibus, maculis argenteis notatis. Capel's Mottled Holly.

Aquifolium foliis latissimis, spinis & limbis flavescentibus. *Glory of the East Holly.*

Aquifolium foliis oblongis, spinis majoribus, foliis ex aureo variegatis. *Glory of the West Holly.*

Aquifolium foliis oblongis, spinis & limbis argenteis. *The Hertfordshire white Holly.*

Aquifolium foliis longioribus, spinis & limbis argenteis. *The Union Holly.*

Aquifolium foliis parvis, interdum vix spinosis, limbis foliorum argentatis. Whitmill's Holly.

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Buxus foliis ex luteo variegatis. H. R. Par. *The yellow-strip'd Box-tree.*

Buxus major, foliis per limbum aureis. H. R. Par. *The gold-edged Box-tree.*

Buxus major, foliis per limbum argenteis. *The silver-edged Box-tree.*

Hedera communis minor, foliis ex albo & viridi variegatis. *The silver-strip'd Ivy.*

Hedera communis minor, foliis ex aureo variegatis. *The yellow-strip'd Ivy.*

Laurocerasus foliis ex luteo variegatis. *The yellow-strip'd Laurel.*

Laurocerasus foliis ex albo variegatis. *The white-strip'd Laurel.*

Phillyrea latifolia lævis, foliis ex luteo variegatis. *The true Phillyrea, with yellow-strip'd Leaves.*

Rosmarinus angustiore folio, argenteus. H. R. Par. *The silver Rosemary.*

Rosmarinus striatus sive aureus. Park. Theat. *The gold-strip'd Rosemary.*

Sabina folio variegato. *The strip'd Savin.*

Taxus foliis variegatis. *The strip'd Tew.*

Thuya Theophrasti, foliis eleganter variegatis. *The strip'd Arbor Vitæ.*

Thymelæa lauri folio, sempervirens, foliis ex luteo variegatis. *The strip'd Spurge Laurel.*

Tinus prior Clusii, foliis ex albo variegatis. *The strip'd shining-leav'd Laurustinus.*

Tinus secundus Clusii, foliis ex luteo variegatis. *The strip'd rough-leav'd Laurustinus.*

I Shall next add a List of such ever-green Shrubs as will thrive in the open Air in England, provided they are planted in a warm Situation, and on a dry Soil; but as these are sometimes destroyed by very sharp Winters, so they are not proper to intermix with the before-mentioned Sorts; because if these should be destroyed after having grown six or eight Years, it will occasion such Chasms in the Plantation, as would render it very unsightly. Therefore the better Way is to range these in

X x x x

Clumps,

A D D E N D A.

Clumps, in some warm Situations, where they may continue several Years, and make a handsome Appearance; and if they should be destroyed, they may soon be repaired again, where there are some Plants of each Kind preserved in Shelter.

Abinthium arborescens. Lob. Icon. *The Wormwood-tree.*

Alaternoides Africana, ericæ foliis, floribus albicantibus & muscosis. H. Amst. *The African Alaternoides.*

Althæa frutescens, folio acuto, parvo flore. C. B. P. *Shrubby Marsh-mallow, with a pointed Leaf, and small Flower.*

Althæa frutescens Lusitanica, folio ampliore, minus incano. Inst. R. H. *Portugal shrubby Marsh-mallow, with a larger and less hoary Leaf.*

Althæa frutescens, folio bryoniæ. C. B. P. *Shrubby Marsh-mallow, with a Bryony-leaf.*

Althæa frutescens Lusitanica, folio rotundiori undulato. Inst. R. H. *Portugal shrubby Marsh-mallow, with a rounder waved Leaf.*

Althæa maritima arborea Gallica. Inst. R. H. *The Mallow-tree.*

Anagyris vera foetida. J. B. *The stinking Bean-trefoil.*

Anonis purpurea verna, seu præcox, perennis frutescens, flore rubro amplo. Mor. Hist. *Shrubby vernal Rest-harrow, with a large red Flower.*

Atriplex latifolia, sive halimus fruticosus latifolius. Mor. H. *The Sea Purslain-tree.*

Barba Jovis pulchrè lucens. J. B. *The Silver-bush.*

Cistus mas major, folio rotundiore. J. B. *Greater male Cistus, or Rock-rose, with a rounder Leaf.*

Cistus mas, folio brevior. C. B. P. *Rock-rose, with a shorter Leaf.*

Cistus mas Lusitanica, folio amplissimo incano. Inst. R. H. *Portugal Rock-rose, with a larger hoary Leaf.*

Cistus mas, folio oblongo incano. C. B. P. *Rock-rose, with an oblong hoary Leaf.*

Cistus mas, foliis undulatis & crispis. Inst. *Rock-rose with waved and curled Leaves.*

Cistus ladanifera Monspeliensium. C. B. P. *Narrow-leav'd Gum Cistus of Montpellier.*

Cistus ladanifera Cretica, flore purpureo. Tourn. Cor. *The true Gum Cistus of Candy.*

Cistus ladanifera, latiore folio acuminato, flore majore albo. *The broad-leav'd Gum Cistus.*

Colutea Æthiopica, flore phœnicio, folio barbæ Jovis. Breyn. Cent. *The scarlet flowering Colutea.*

Coronilla maritima, glauco folio. Inst. R. H. *Jointed podded Colutea.*

Cytisus hirsutus. J. B. *Hairy Cytisus.*

Dorycnium Monspeliensium. Lob. Icon. *Shrub Trefoil of Montpellier.*

Jasminoides Africanum, jasmini aculeati foliis & facie. Raii. *African Bastard Jasmine.*

Medicago trifolia frutescens incana. Inst. R. H. *Hoary Moon-trefoil, or Cytisus.*

Melianthus Africanus. H. L. *The Honey-tree.*

Melianthus Africanus minor foetidus. Com. Rar. *Smaller stinking Honey-tree.*

Phlomis fruticosa, salviæ folio latiore & rotundiore. Inst. R. H. *The broad-leav'd Jerusalem Sage-tree.*

Phlomis fruticosa, salviæ folio longiore & angustiore. Inst. R. H. *Narrow-leav'd Tree-sage.*

Phlomis fruticosa humilis latifolia candidissima, floribus luteis. Rand. *Dwarf Sage-tree, with very broad woolly Leaves, and yellow Flowers.*

Siliqua edulis. C. B. P. *The Carob, or St. John's-bread.*

Teucrium Hispanicum, latiore folio. Inst. R. H. *Broad-leav'd Spanish Tree-germander.*

Teucrium multis. J. B. *Common Tree-germander.*

Teucrium Bæticum. Clus. Hisp. *Spanish Tree-germander.*

Trifolium bitumen redolens. C. B. P. *Stinking shrub Trefoil.*

Trifolium bituminosum arboreum, angustifolium ac sempervirens. H. Cath. *Narrow-leav'd Tree-trefoil of a bituminous Scent.*

A D D E N D A

A CATALOGUE of HARDY PERENNIAL FLOWERING PLANTS, which will thrive in Common Borders without any Covering; and are not of too large Growth to be admitted into the Flower- Garden, nor are subject to spread by their Roots, and do not require to be taken up every Year.

Aconitum lycoctonum luteum. C. B. P. *Yellow Wolfsbane or Monkshood.*

Aconitum saluterum seu anthora. C. B. P. *Wholsome Monkshood.*

Aconitum Pyrenaicum, ampliore folio tenuius laciniato. Inst. R. *Pyrenean Monkshood, with a larger Leaf finely jagged.*

Aconitum comâ inflexâ, foliis angustioribus. C. B. P. *Narrow-leav'd Monkshood, with a bending Spike.*

Aconitum violaceum, seu napellus 2. C. B. P. *Violet-colour'd Monkshood.*

Adonis hellebori radice, bupthalmi flore. H. L. *Perennial Adonis, with a large yellow Flower.*

Anonis Caroliniana perennis non spinosa, foliorum marginibus integris, floribus in thyrsis candidis. Martyn. Cent. *Perennial Rest-harrow of Carolina, with white Flowers growing in Spikes.*

Apocynum erectum Canadense angustifolium. Par. Bat. *Upright Canada Dogsbane, with a narrow Leaf.*

Aquilegia hortensis multiplex, flore magno cœruleo. C. B. P. *Double Garden Columbine, with a large blue Flower.*

Aquilegia hortensis multiplex, flore magno violaceo. C. B. P. *Double Garden Columbine, with a large violet Flower.*

Aquilegia hortensis multiplex, flore magno saturatè rubente. C. B. P. *Double Garden Columbine, with a large deep-red Flower.*

Aquilegia hortensis multiplex, flore magno variegato. C. B. P. *Double Garden Columbine, with a large variegated Flower.*

Aquilegia flore roseo multiplici. *The double rose Columbine.*

Aquilegia stellata, flore pleno purpureo. *The double starry Columbine, with a purple Flower.*

Asphodelus albus ramosus mas. C. B. P. *Great white branching Kingspear.*

Asphodelus albus ramosus minor, seu ramosus alter. H. R. Par. *Small white branching Kingspear.*

Asphodelus albus non ramosus. C. B. P. *White unbranch'd Kingspear.*

After Atticus cœruleus vulgaris. C. B. P. *Italian Starwort.*

After tripolii flore. C. B. P. *Starwort with a Flower like Tripolium.*

After Virginianus pyramidatus, hyssopi foliis asperis, calycis squamulis foliaceis. Rand. *Late-flowering Virginia Starwort, with narrow Leaves, and large blue Flowers.*

After Novæ Angliæ, linariæ folio, chamæmeli floribus. Par. Bat. *New-England narrow-leav'd Starwort, with chamomile Flowers.*

Asteroides Alpina, falicis folio. Cor. Inst. *Alpine Bastard Starwort, with a Willow-leaf.*

Bupthalmum tanacetii minoris foliis. C. B. P. *Yellow Ox-eye, with Tansey-leaves.*

Bupthalmum orientale, tanacetii minoris folio, flore luteo amplissimo. Tourn. Cor. *Eastern Ox-eye, with a larger yellow Flower.*

Bupthalmum orientale, tanacetii minoris folio incano, flore sulphureo amplissimo. Boerh. *Eastern Ox-eye, with a hoary Tansey-leaf, and a large brimstone-colour'd Flower.*

Bupthalmum orientale, tanacetii minoris folio, flore albo amplissimo. Tourn. Cor. *Eastern Ox-eye, with a large white Flower.*

Campanula pyramidata altissima. Inst. R. H. *The tallest pyramidal Bell-flower.*

Campanula persicæ folio. Clus. Hist. *The peach-leav'd Bell-flower.*

Campanula persicæ folio, flore albo. H. Eyf. *The white peach-leav'd Bell-flower.*

Campanula persicæ folio, flore pleno cœruleo. Inst. R. H. *The peach-leav'd Bell-flower, with a double blue Flower.*

Campanula persicæ folio, flore albo pleno. Inst. R. H. *The peach-leav'd Bell-flower, with a double white Flower.*

Cardamine pratensis, magno flore pleno. Inst. R. H. *Double Ladysmock.*

Clematitis cœrulea erecta. C. B. P. *Upright blue Virgins-bower.*

Clematitis five flammula surrecta alba. C. B. P. *Upright white Virgins-bower.*

Clematitis Hispanica surrecta, altera & humilior, flore albicante. H. R. Par. *Upright dwarf Spanish Virgins-bower, with a white Flower.*

Cyanus

A D D E N D A.

Cyanus angustiore folio & longiore, Belgicus. H. R. Par. *Narrow-leav'd perennial Blue-bottle.*

Cyclamen hederæ folio. C. B. P. *The common Sow-bread.*

Cyclamen hederæ folio, flore albo. *The Sow-bread with white Flowers.*

Digitalis latifolia, flore ferrugineo. H. R. Par. *Broad-leav'd iron-coloured Fox-glove.*

Digitalis angustifolia, flore ferrugineo. C. B. Par. *Narrow-leav'd iron-colour'd Fox-glove.*

Ephemerum Virginianum, flore cœruleo majori. Inst. R. H. *Virginian Spiderwort, with a larger blue Flower.*

Ephemerum Virginianum, flore purpureo majori. Inst. R. H. *Virginian Spiderwort, with a larger purple Flower.*

Ephemerum Virginianum, flore albo majori. Inst. R. H. *Virginian Spiderwort, with a larger white Flower.*

Eryngium montanum amethystinum. C. B. P. *Alpine Sea-bolly, with an amethyst Flower.*

Eryngium Alpinum amethystinum, capitulo majore pallescente. Inst. R. H. *Alpine Sea-bolly, with a larger and paler Head.*

Fraxinella. Clus. Hist. *White Dittany.*

Fraxinella purpurea major multiflora. H. R. Par. *Greater white Dittany, with many purple Flowers.*

Fraxinella minor purpurea Belgarum. H. R. Par. *Smaller white Dittany of the Dutch, with purple Flowers.*

Fraxinella niveo flore. Clus. Hist. *White Dittany with a snow Flower.*

Fumaria sempervirens & florens, flore albo. Flor. *Ever-green Fumitory, with a white Flower.*

Fumaria lutea. C. B. P. *Yellow Fumitory.*

Fumaria bulbosa, radice cavâ, major. C. B. P. *The greater Hollow-root.*

Fumaria bulbosa, radice non cavâ, major. C. B. P. *Greater bulbous rooted Fumitory.*

Gentiana major lutea. C. B. P. *The great yellow Gentian.*

Gentiana Alpina, magno flore. J. B. *The Gentianella.*

Gentiana asclepiadis folio. C. B. P. *Gentian with a swallow-wort Leaf.*

Gentiana palustris angustifolia. C. B. P. *Narrow-leav'd marsh Gentian.*

Gentiana pratensis, flore lanuginoso. C. B. P. *Meadow Gentian, with a woolly Flower.*

Geranium batrachoides, Gratia Dei Germanorum. C. B. P. *Cranesbill with a Crowfoot-leaf.*

Geranium sanguineum, maximo flore. C. B. P. *The bloody Cranesbill.*

Geranium hæmatodes Lancastriense, flore eleganter striato. Raii Hist. *The Lancaster Cranesbill, with a strip'd Flower.*

Geranium nodosum. *Knotty Cranesbill.*

Geranium orientale columbinum, flore maximo, asphodeli radice. Cor. Inst. *Eastern doves-foot Cranesbill, with a large Flower, and an asphodel Root.*

Geranium Alpinum, coriandri folio, longius radicatum, flore purpureo maximo. Michel. *Alpine Cranesbill, with a Coriander-leaf, a long Root, and a large purple Flower.*

Geranium Romanum versicolor, five striatum. Park. Parad. *The Roman Cranesbill, with a strip'd Flower.*

Geum folio subrotundo, majori pistillo floris rubro. Inst. R. H. *London Pride.*

Geum folio subrotundo minori, pistillo floris rubro. Inst. R. H. *Smaller London Pride.*

Geum rotundifolium majus. Inst. R. H. *Great round-leav'd London Pride.*

Hedysarum triphyllum Canadense. Cornut. *Three-leav'd Canada French Honeysuckle.*

Heleniastrum folio longiore & angustiore. Vaill. *Bastard Elecampane, with a longer and narrower Leaf.*

Heleniastrum folio brevioris & latioris. Vaill. *Bastard Elecampane, with a shorter and broader Leaf.*

Helenium cisti folio, non crenato, magno flore. Vaill. *Yellow Starwort, with a large Flower.*

Helleborus niger flore albo, etiam interdum valdè rubente. J. B. *The Christmas Rose, or true black Hellebore.*

Helleborus niger, angustioribus foliis. Inst. R. H. *Narrow-leav'd black Hellebore.*

Helleborus niger trifolius. Hort. Farn. *Three-leav'd black Hellebore.*

Helleborus niger, ranunculi folio, flore globofo majore. Inst. R. H. *The yellow Globe-flower, or Lockergowlans.*

Hepatica trifolia, cœruleo flore. Clus. H. *The single blue Hepatica.*

Hepatica trifolia, cœruleo flore pleno. Clus. H. *The double blue Hepatica.*

Hepatica trifolia, rubro flore. Clus. Hist. *The single peach-colour'd Hepatica.*

Hepatica trifolia, flore rubro pleno. Boerh. Ind. *The double peach-colour'd Hepatica.*

Hepatica trifolia, flore albo simplici. Boerh. Ind. *The single white Hepatica.*

Hermodactylus folio quadrangulo. Tourn. Cor. *The Snakeshead Iris, vulgò.*

Hesperis flore purpureo pleno. H. R. Par. *The double purple Rocket.*

Hesperis flore albo pleno. H. R. Par. *The double white Rocket.*

Iris vulgaris violacea, five purpurea sylvestris. J. B. *The common blue Iris, or Flower-de-luce.*

Iris hortensis latifolia. C. B. P. *Broad-leav'd garden Flower-de-luce.*

Iris hortensis alba Germanica. C. B. P. *The garden white Flower-de-luce.*

Iris alba Florentina. C. B. P. *The white Florentine Iris.*

Iris Sufiana, flore maximo, ex albo nigricante. C. B. P. *The Calcedonian Iris, or Flower-de-luce.*

Iris

A D D E N D A.

Iris Dalmatica major. C. B. P. *The great Dalmatian Flower-de-luce.*

Iris latifolia Pannonica, colore multiplici. C. B. P. *The Hungarian Flower-de-luce.*

Iris angustifolia maritima major. C. B. P. *Great narrow-leav'd Sea-iris.*

Iris angustifolia maritima minor. C. B. P. *Smaller narrow-leav'd Sea-iris.*

Iris angustifolia hortensis versicolor. C. B. P. *Narrow-leav'd Garden-iris, with a strip'd Flower.*

Iris angustifolia prunum redolens minor. C. B. P. *Small narrow-leav'd Iris, smelling like Plums.*

Iris Americana versicolor, stylo non crenato. Hort. Elth. *Strip'd American Iris, with an intire Style.*

Iris Americana versicolor, stylo crenato. Hort. Elth. *Strip'd American Iris, with a notch'd Style.*

Iris humilis minor, flore purpureo. Inst. R. H. *The dwarf Iris.*

Iris Asiatica cœrulea polyanthos. C. B. P. *Blue Asiatic Iris, with many Flowers.*

Iris peregrina subrubens inodora. C. B. P. *Reddish foreign Iris without Scent.*

Iris peregrina, odore oxyacanthæ. C. B. P. *Foreign Iris, smelling like white Thorn.*

Iris Dalmatica minor. C. B. P. *Small Dalmatian Iris.*

Iris Byzantina purpureo-cœrulea. C. B. P. *Purple blue Flower-de-luce of Constantinople.*

Iris latifolia Germanica ochroleucos. C. B. P. *Broad-leav'd German Iris, with a whitish yellow Flower.*

Iris latifolia humilior versicolor. C. B. P. *Dwarf strip'd Flower-de-luce.*

Lilio-asphodelus luteus. Par. *The yellow Day-lily.*

Lilio-narcissus luteus autumnalis major. Inst. R. H. *The larger yellow autumnal Narcissus.*

Lilio-narcissus luteus autumnalis minor. Inst. R. H. *The smaller yellow autumnal Narcissus.*

Lilio-hyacinthus vulgaris, flore cœruleo. Inst. R. H. *The common blue Lily-hyacinth.*

Lilio-hyacinthus vulgaris, flore niveo. Inst. R. H. *The common white Lily-hyacinth.*

Lilio-hyacinthus vulgaris, flore rubello. Inst. R. H. *Common Lily hyacinth, with a reddish Flower.*

Lychnis hirsuta, flore coccineo; major. C. B. P. *The single scarlet Lychnis.*

Lychnis Chalcedonica, flore pleno miniato, seu aurantiaco. Mor. *The double scarlet Lychnis.*

Lychnis coronaria fativa multiplex. C. B. P. *The double rose Campion.*

Lychnis alba multiplex. C. B. P. *The double white Batchelors-button.*

Lychnis purpurea multiplex. C. B. P. *The double purple Batchelors-button.*

Lychnis pratensis, flore laciniato pleno ampliore purpureo. Inst. R. H. *The double ragged Robin.*

Lychnidea Virginiana, holostii ampliore folio, floribus umbellatis purpureis. Act. Phil.

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The Virginian Lychnidea, with purple Flowers growing in an Umbel.

Lychnidea Caroliniana, floribus quasi umbellatim dispositis, foliis lucidis crassis acutis. Martyn. *The Carolina Lychnidea.*

Lyfimachia spicata, flore albo, salicis folio. Inst. R. H. *Spiked Looserise, with white Flowers, and a Willow-leaf.*

Moly latifolium liliflorum. C. B. P. *Broad-leav'd Moly of Theophrastus.*

Moly latifolium Indicum. C. B. P. *Broad-leav'd Indian Moly.*

Moly latifolium Hispanicum. C. B. P. *Broad-leav'd Spanish Moly.*

Moly latifolium, flavo flore. Clus. App. *The broad-leav'd yellow Moly.*

Moly angustifolium umbellatum. C. B. P. *Homer's Moly.*

Moly angustifolium, foliis reflexis. C. B. P. *The serpent Moly.*

Moly moschatum, capillaceo folio. C. B. P. *The sweet Moly of Montpellier.*

Moly narcissinis foliis i. Clusii Hist. *Moly with Daffodil-leaves.*

Moly narcissinis foliis, altera species Clusii Hist. *Another Moly, with Daffodil-leaves.*

Narcisso-leucoium trifolium majus. Inst. R. H. *be great early nowdrop.*

Narcisso-leucoium flore patulo. Inst. R. H. *Snowdrop with an open Flower.*

Narcisso-leucoium prætense multiflorum. Inst. R. H. *Many-flower'd meadow Snowdrop.*

Obeliscotheca integrifolia, radio aureo, umbone atro-rubente. Hort. Elth. *The dwarf Virginia Sunflower, vulgò.*

Omphalodes pumila verna, symphyti folio. Inst. *Dwarf spring Navewort, with a Comfrey-leaf.*

Ornithogalum angustifolium majus, floribus ex albo virescentibus. C. B. P. *Great narrow-leav'd Star of Bethlehem, with a greenish white Flower.*

Ornithogalum majus spicatum album. C. B. P. *The great white Star of Bethlehem.*

Ornithogalum latifolium maximum. C. B. P. *The greatest broad-leav'd Star of Bethlehem.*

Ornithogalum medium umbellatum angustifolium. C. B. P. *The middle narrow-leav'd umbellated Star of Bethlehem.*

Ornithogalum luteum. C. B. P. *The yellow Star of Bethlehem.*

Ornithogalum angustifolium spicatum maximum. C. B. P. *The spiked Star of Bethlehem, with narrow Leaves.*

Ornithogalum spicatum, seu comosum, flore lacteo. C. B. P. *Spiked or branched Star of Bethlehem, with a white Flower.*

Ornithogalum luteum, magno flore. C. B. P. *Yellow Star of Bethlehem, with a large Flower.*

Ornithogalum umbellatum maximum. C. B. P. *The Star Flower of Alexandria.*

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Orobus

A D D E N D A.

Orobis Venetus. Clus. Hist. *The Venetian Vetch.*

Orobis sylvaticus, foliis viciæ. C. B. P. *The Everlasting-tare*, vulgò.

Pæonia folio nigricante splendido, quæ mas. C. B. P. *The male Piony.*

Pæonia fœmina, flore pleno rubro majore. C. B. P. *Female Piony*, with a large red double Flower.

Pæonia flore pleno rubro minore. C. B. P. *Smaller double red Piony.*

Pæonia fœmina, flore albo pleno majore. C. B. P. *The larger double white Piony.*

Pancratium maritimum, floribus albis. *The Sea-daffodil*, vulgò.

Pancratium floribus rubris. Lob. *The Red-sea-daffodil.*

Papaver orientale hirsutissimum, magno flore. Tourn. Cor. *Great hairy eastern perennial Poppy.*

Phalangium parvo flore, ramosum. C. B. P. *Branching Spiderwort*, with a small Flower.

Phalangium parvo flore, non ramosum. C. B. P. *Unbranched Spiderwort*, with a small Flower.

Polemonium vulgare cœruleum. Inst. R. H. *Blue Greek Valerian.*

Polemonium vulgare album. Inst. R. H. *White Greek Valerian.*

Populago flore pleno. Inst. R. H. *The double marsh Marygold.*

Primula veris flore pleno. Hor. Eyf. *The double Primrose.*

Primula veris flore rubro pleno. *The double red Primrose.*

Ptarmica vulgaris, pleno flore. Clus. Hist. *The double Sneezwort.*

Pulsatilla folio crassiore, & majore flore. C. B. P. *The larger Pasque-flower.*

Pulsatilla flore minore nigricante. C. B. P. *The smaller Pasque-flower.*

Pulsatilla flore albo. C. B. P. *The white Pasque-flower.*

Pulsatilla flore violaceo duplici fimbriato. H. R. Par. *The Pasque-flower*, with a double violet-fringed Flower.

Ranunculus radice tuberosâ, flore pleno & prolifero. C. B. P. *The double childing Crow-foot.*

Ranunculus montanus, aconiti folio, albo flore minore. C. B. P. *The mountain Crow-foot*, with a small white Flower.

Ranunculus folio aconiti, flore albo multiplici. C. B. P. *The double white mountain Crowfoot.*

Ranunculus hortensis erectus, flore pleno. C. B. P. *The double upright garden Crowfoot.*

Ranunculus magnus hirsutus repens, flore pleno. J. B. *The great hairy creeping Crow-foot*, with a double Flower.

Ruyschiana flore cœruleo magno. Boerh. Ind. alt. *Ruyschiana with a large blue Flower.*

Saxifraga rotundifolia alba, flore pleno. Boerh. Ind. alt. *The double Saxifrage.*

Saxifraga Alpina ericoides, flore cœruleo. Inst. R. H. *Heathlike Saxifrage of the Alps*, with a blue Flower.

Saxifraga sedi folio angustiore serrato. Tourn. *Narrow saw'd houseleek-leav'd Saxifrage.*

Saxifraga sedi folio, flore albo multiplici. Inst. R. H. *Houseleek-leav'd Saxifrage*, with many white Flowers.

Saxifraga foliis subrotundis ferratis. Inst. R. H. *Saxifrage with roundish saw'd Leaves.*

Scrophularia Hispanica, sambuci folio glabro. Inst. R. H. *Spanish Figwort*, with a smooth Elder-leaf.

Scrophularia maxima Lusitanica, sambuci folio lanuginoso. Inst. R. H. *The largest Portugal Figwort*, with a woolly Elder-leaf.

Thalictrum Alpinum, aquilegiæ foliis, florum staminibus purpurascens. Inst. R. H. *Feather'd Columbine*, with purple Chives.

Thalictrum Alpinum majus, aquilegiæ foliis, florum staminibus albis, caule viridi. Inst. R. H. *Greater feather'd Columbine*, with white Chives, and a green Stalk.

Thalictrum Canadense, caule purpurascens, aquilegiæ foliis, florum staminibus albis. Inst. R. H. *Canada feather'd Columbine*, with a purplish Stalk, and white Chives to the Flowers.

Valeriana rubra. C. B. P. *Garden red Valerian.*

Valeriana rubra angustifolia. C. B. P. *Narrow-leav'd red Valerian.*

Valeriana marina latifolia, five major alba. Mor. Hist. *Great white Valerian.*

Veratrum flore subviridi. Inst. R. H. *White Hellebore*, with a green Flower.

Veratrum flore atro-rubente. Inst. R. H. *White Hellebore*, with a dark-red Flower.

Veronica spicata Cambro-Britannica, bugulæ subhirsuto folio. Raii Syn. *Spiked Welsh Speedwell.*

Veronica erecta angustifolia. Park. Theat. *Narrow-leav'd upright Speedwell.*

Veronica major latifolia erecta. Mor. Hist. *Great broad-leav'd upright Speedwell.*

Veronica multicaulis Pannonica. Inst. R. H. *Hungarian Speedwell*, with many Stalks.

Veronica longifolia Virginiana altissima, foliis ternis profundis ferratis caulem amplexantibus, spicâ multiplici cœruleâ. Royen. *The tallest long-leav'd Virginia Speedwell*, with many Spikes of blue Flowers.

Veronica Virginiana altissima, spicâ multiplici, floribus candidis. Flor. Bat. *Tallest Virginia Speedwell*, with many Spikes of white Flowers.

Virga aurea angustifolia, paniculâ speciosâ, Canadensis. H. R. Par. *Narrow-leav'd Canada Golden-rod*, with a specious Panicle.

Virga aurea rugosis foliis, Virginiana, paniculâ florum amplissimâ. Pluk. *Virginia Golden-rod*, with rough Leaves, and an ample Panicle of Flowers.

Virga aurea Canadensis, asteris folio. Par. Bat. *Canada Golden-rod*, with an Asteriscus-leaf.

Virga

A D D E N D A.

Virga aurea Marylandica cæsia glabra. Hort. Elth. *Smooth Maryland Golden-rod.*

Virga aurea Americana ferrata, floribus ad foliorum alas conglobatis. Breyn. *Sawed American Golden-rod, with Flowers growing in Clusters from the Wings of the Leaves.*

Virga aurea limonii folio, paniculâ uno versu dispositâ. H. R. Par. *Golden-rod with a feather-vender Leaf, and the Flowers ranged on one side of the Panicle.*

Virga aurea foliis angustis lævibus non serratis, paniculâ speciosâ, floribus magnis. Boerh. Ind. *Smooth narrow-leav'd Golden-rod, with a specious Panicle of large Flowers.*

Virga aurea Americana hirsuta, radice odoratâ. Joncq. *Hairy American Golden-rod, with a sweet Root.*

Ulmaria flore pleno. Jeff. *Meadow-sweet with a double Flower.*

In this Catalogue I have only enumerated

such particular *Species* of Plants, whose Flowers are elegant, therefore merit a Place in the Borders of the Flower-garden; and all those Sorts which grow too ramping for the Flower-garden, and only merit a Place in large Woodwalks, will be inserted in a separate Catalogue. I have also omitted mentioning the several *Species* of common bulbous and tuberose-rooted Flowers, which are known to every Person the least acquainted with the Flower-garden, because it would have swelled the Catalogue to too great a Bulk; so have only mentioned such Sorts as will thrive with very little Culture, neither requiring to be taken up every Year, as most of the bulbous-rooted Flowers should; nor to be laid down for an Increase, as the Pinks, Carnations, &c. require. So that when the Borders are dug between these, there should be Care taken not to injure their Roots, and they may remain three or four Years without transplanting.

A CATALOGUE of such PLANTS as will grow in great Shade under TREES in Woodwork or Wildernesses.

A Conitum pyramidale multiflorum. H. R. Par. *Common Monkshood.*

Agrimonia officinarum. Inst. R. H. *Common Agrimony.*

Anapodophyllon Canadense Morini. Inst. R. H. *May-apple or Ducksfoot.*

Androsæsum maximum frutescens. C. B. P. *Tutsan or Park-leaves.*

Anemonoides flore albo. Boerh. Ind. *Wood Anemone with a white Flower.*

Anemonoides flore ex purpurâ rubente. Boerh. Ind. *Wood Anemone with a purplish-red Flower.*

Anemonoides flore majore intensiore cœruleo. Boerh. Ind. *Wood Anemone with a larger deep blue Flower.*

Anemonoides flore albo pleno. Boerh. Ind. *Wood Anemone with a double white Flower.*

Aquilegia sylvestris. C. B. P. *Wild Columbine.*

Aristolochia clematitis recta. C. B. P. *Upright climbing Birthwort.*

Afcyrum magno flore. C. B. P. *Sir George Wheeler's Tutsan.*

Asperula odorata, flore albo. C. B. P. *Wood-roof with a white Flower.*

Betonica purpurea. C. B. P. *Common Betony.*

Betonica major Danica. Park. Theat. *Great Danish Betony.*

Buglossum latifolium sempervirens. C. B. P. *Broad-leav'd ever-green Bugloss.*

Bugula. Dod. *The Bugule.*

Campanula maxima, foliis latissimis, flore cœruleo. C. B. P. *Great Throatwort or Bell-flower.*

Campanula vulgatior, foliis urticæ, vel major & asperior. C. B. P. *Common rough Bell-flower, with Nettle-leaves.*

Campanula rotundifolia. Ger. *Round-leav'd Bell-flower.*

Caryophyllata vulgaris. C. B. P. *Common Avena or Herb-bennet.*

Caryophyllata montana, flore luteo nutante. H. R. Par. *Mountain Avena, with a yellow nodding Flower.*

Caryophyllata Alpina lutea. C. B. P. *Yellow Alpine Avena.*

Chamænerion glabrum majus. Inst. R. H. *Greater smooth Loosetrife.*

Chamænerion glabrum minus. Inst. R. H. *Lesser smooth Loosetrife.*

Chamænerion angustifolium glabrum. Inst. R. H. *Narrow-leav'd smooth Loosetrife.*

Chelidonium majus vulgare. C. B. P. *Common Celandine.*

Chelidonium majus, foliis quernis. C. B. P. *Oak-leav'd Celandine.*

Chelone

A D D E N D A.

Chelone Acadiensis. Aët. R. Par.
Christophoriana vulgaris nostras, racemosa
 & ramosa. Mor. Hist. *Herb Christopher*.
Circæa Lutetiana. Lob. Icon. *Incanters*
Nightshade.

Circæa minima. Col. *The least Incanters*
Nightshade.

Cyanus montanus latifolius, vel *verbasculum*
cyanoïdes. C. B. P. *Greater Blue-bottle*.

Dentaria pentaphyllos, foliis mollioribus.
 C. B. P. *Smooth five-leav'd Toothwort*.

Dentaria heptaphyllos baccifera. C. B. P.
Berry-bearing Toothwort, with seven Leaves.

Digitalis purpurea. J. B. *Common purple*
Fox-glove.

Digitalis flore magno candido. J. B. *White*
Fox-glove.

Doronicum radice scorpii. C. B. P. *Leo-*
pards-bane.

Doronicum plantaginis folio. C. B. P. *Plan-*
tain-leav'd Leopards-bane.

Doronicum plantaginis folio, alterum. C.
 B. P. *Another plantain-leav'd Leopards-*
bane.

Dracunculus polyphyllus. C. B. P. *The*
Dragon.

Elichrysium Americanum latifolium. Inst.
 R. H. *Common Everlasting*.

Ephedra maritima major. Inst. R. H. *Shrubby*
Horse-tail.

Epimedium. Dod. *Barren-wort*.

Galeopsis procerior foetida spicata. Inst. R.
 H. *Stinking Hedge-nettle*.

Galeopsis five urtica iners, flore luteo. J. B.
Yellow Dead-nettle.

Geranium batrachoides montanum nostras.
 Ger. *Mountain Cranesbill, with a Crowfoot-*
leaf.

Geranium fanguineum, maximo flore. C.
 B. P. *Bloody Cranesbill*.

Geranium phœum five fuscum, petalis re-
 flexis. Mor. Hist. *Brown Cranesbill*.

Helleborine latifolia montana. C. B. P. *Com-*
mon bastard Hellebore.

Helleborine altera, atro-rubente flore. C.
 B. P. *Bastard Hellebore, with a dark-red*
Flower.

Helleborine flore albo. Ger. *Bastard Helle-*
bore with a white Flower.

Helleborine latifolia, flore albo clauso. Raii
 Syn. *A broad leav'd bastard Hellebore, with a*
white closed Flower.

Helleborine foliis prælongis angustis acutis.
 Raii Syn. *Bastard Hellebore, with long nar-*
row-pointed Leaves.

Helleborine montana angustifolia purpu-
raicens. C. B. P. *Purple narrow-leav'd moun-*
tain bastard Hellebore.

Helleborus niger foetidus. C. B. P. *Bearsfoot*
or stinking black Hellebore.

Helleborus niger hortensis, flore viridi. C.
 B. P. *Green-flower'd black Hellebore*.

Helleborus niger tuberosus, ranunculi folio,
 flore luteo. Inst. R. H. *Winter Aconite*.

Herba Paris. Dod. *Herb True-love or*
One-berry.

Hieracium minus, præmorsa radice. Park.
 Theat. *Long-rooted Hawkweed*.

Hieracium fruticosum latifolium hirsutum.
 C. B. P. *Broad-leav'd hairy shrubby Hawk-*
weed.

Hieracium fruticosum latifolium glabrum.
 Park. Theat. *Smooth broad-leav'd shrubby*
Hawkweed.

Hieracium fruticosum angustifolium majus.
 C. B. P. *Greater narrow-leav'd shrubby Hawk-*
weed.

Hieracium Sabaudum altissimum, foliis latis
 brevibus, crebrius nascentibus. Mor. Hist.
Tallest Savoy Hawkweed, with short broad
Leaves.

Hieracium murorum, folio longiore dissecto,
 maculis lividis asperio. Vaill. *Long-leav'd*
spotted Hawkweed.

Hyacinthus Anglicus. Ger. *English Hair-*
bells.

Hyacinthus non scriptus, flore candido. Dod.
White English Hair-bells.

Hyacinthus Anglicus, flore incarnato. Hort.
 Eyft. *Fresh-colour'd English Hairbells*.

Hypericum elegantissimum non ramosum,
 folio lato. J. B. *Elegant unbranched St.*
John's-wort, with a broad Leaf.

Hypericum minus erectum. C. B. P. *The*
least upright St. John's-wort.

Hypericum villosum erectum, caule rotundo.
 Inst. R. H. *Upright hairy St. John's-wort with*
a round Stalk.

Jacea nigra vulgaris laciniata. Park. Theat.
Common black Knapweed, with jagged Leaves.

Iris foetidissima, seu *xyris*. Inst. R. H. *Stink-*
ing Gladwin.

Leucanthemum vulgare. Inst. R. H. *Com-*
mon Ox-eye-daizy.

Leucanthemum Alpinum majus, rigido fo-
 lio. Inst. R. H. *Greater stiff Ox-eye-daizy of*
the Alps.

Leucanthemum radice repente, foliis latio-
 ribus ferratis. Inst. R. H. *Ox-eye-daizy with*
a creeping Root, and broad saw'd Leaves.

Lilio-alphodelus puniceus. Park. Parad.
Red Day-lily.

Lilium purpureo-croceum majus. C. B. P.
The Orange lily.

Lilium purpureo-croceum minus. C. B. P.
The small Orange-lily.

Lilium bulbiferum latifolium majus. C. B. P.
The greater bulb-bearing fiery Lily.

Lilium convallium album. C. B. P. *The*
white Lily of the Valley.

Lilium convallium latifolium. C. B. P. *The*
broad-leav'd Lily of the Valley.

Lilium convallium flore rubente. C. B. P.
Lily of the Valley, with a pale-red Flower.

Lilium

A D D E N D A.

Lilium convallium latifolium, flore pleno variegato. Didac. Inst. R. H. *Broad-leav'd Lily of the Valley, with a double variegated Flower.*

Lychnis sylvestris quæ saponaria, vulgò. Inst. R. H. *Sopewort.*

Lychnis seu saponaria flore pleno. Inst. R. H. *Double Sopewort.*

Lyfimachia bifolia, flore globoso luteo. C. B. P. *Two-leav'd Loosestrife, with a yellow globular Flower.*

Melampyrum luteum latifolium. C. B. P. *Broad-leav'd yellow Cow-wheat.*

Melampyrum luteum angustifolium. C. B. P. *Narrow-leav'd yellow Cow-wheat.*

Melampyrum purpurascens comâ. C. B. P. *Cow-wheat with a purplish Top.*

Mercurialis montana testiculata. C. B. P. *Testiculated Dogs-mercury.*

Mercurialis montana spicata. C. B. *Spiked Dogs-mercury.*

Moschatellina foliis fumarie bulbosæ. J. B. *Tuberous Moschatel.*

Narcissus sylvestris pallidus, calyce luteo. C. B. P. *Wild Daffodil, with a pale Flower, and yellow Cup.*

Narcissus medio-luteus vulgaris. Park. Theat. *Primrose-pearless.*

Narcissus latifolius pallidus, calyce amplo aureo. C. B. P. *Broad-leav'd pale Daffodil, with a large golden Cup.*

Narcissus major totus luteus, calyce prælongo. C. B. P. *The yellow Spanish Daffodil, with a longer Cup.*

Narcissus multiplex, totus flavus. C. B. P. *The double yellow Daffodil.*

Nummularia lutea major. C. B. P. *Herb Two-pence.*

Onagra latifolia. Inst. R. H. *Broad-leav'd Tree-primrose.*

Onagra latifolia, floribus amplis. Inst. R. H. *Broad-leav'd Tree-primrose, with large Flowers.*

Onagra angustifolia. Inst. R. H. *Narrow-leav'd Tree-primrose.*

Onagra angustifolia, caule rubro, flore minori. Inst. R. H. *Narrow-leav'd Tree-primrose, with a red Stalk, and a smaller Flower.*

Ophris bifolia. C. B. P. *Twylblade.*

Orchis morio mas, foliis maculatis. C. B. P. *Common male Satyrion.*

Orobis sylvaticus nostras. Raii Syn. *Wood Bitter-vetch.*

Orobis purpureus sylvaticus vernus. C. B. P. *Spring purple-wood Bitter-vetch.*

Oxys flore albo. Inst. R. H. *Wood-forrel with a white Flower.*

Oxys flore purpurascens. Inst. R. H. *Wood-forrel with a purplish Flower.*

Pervinca vulgaris latifolia, flore cœruleo. Inst. R. H. *Broad-leav'd Perywinkle, with a blue Flower.*

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Pervinca vulgaris latifolia, flore albo. Inst. R. H. *Broad-leav'd Perywinkle, with a white Flower.*

Pervinca vulgaris angustifolia, flore cœruleo. Inst. R. H. *Common narrow-leav'd Perywinkle, with a blue Flower.*

Pervinca vulgaris angustifolia, flore albo. Inst. R. H. *Common narrow-leav'd Perywinkle, with a white Flower.*

Pervinca vulgaris angustifolia, flore pleno saturatè purpureo. Inst. R. H. *Common narrow-leav'd Perywinkle, with a double purple Flower.*

Polygonatum latifolium vulgare. C. B. P. *Common broad-leav'd Solomon's-seal.*

Polygonatum hellebori albi folio, caule purpurascens. Raii Syn. *Solomon's-seal with a white Hellebore-leaf, and a purplish Stalk.*

Primula veris vulgaris. Park. Theat. *The common Primrose.*

Primula veris Constantinopolitana, flore albo. Inst. R. H. *The paper-white Primrose, vulgò.*

Primula veris flore pleno. Hort. Eyft. *The double Primrose.*

Parmica vulgaris, folio longo ferrato, flore albo. J. B. *Sneezwort.*

Parmica vulgaris, pleno flore. Clus. Hist. *Double Sneezwort or Maudlin.*

Pyrola rotundifolia major. C. B. P. *Great round-leav'd Winter-green.*

Pyrola minor. Riv. *Smaller Winter-green.*

Pyrola folio mucronato ferrato. C. B. P. *Winter-green with a pointed sawed Leaf.*

Ranunculus nemorosus dulcis secundus Tragi. Park. Theat. *Sweet-wood Crowfoot.*

Scabiosa folio integro glabro, flore cœruleo. Inst. R. H. *Wood Scabious, or Devils-bit.*

Scabiosa virgæ pastoris folio. C. B. P. *Scabious with a Teasel-leaf.*

Scabiosa Alpina, foliis centaurii majoris. C. B. P. *Alpine Scabious, with a greater Centaury-leaf.*

Scordium alterum, sive salvia agrestis. C. B. P. *Wild Wood-sage.*

Scrophularia nodosa foetida. C. B. P. *Stinking knobbed-rooted Figwort.*

Scrophularia scorodoniæ folio. Mor. Hist. *Figwort with a wood-sage Leaf.*

Scrophularia nemorensis, folio urticæ rugoso, flore atro-puniceo. Hort. Cath. *Wood Figwort with a rough Nettle-leaf, and a dark-red Flower.*

Senecio Jacobææ folio. Mor. H. R. Blæf. *Groundsel with a Ragwort-leaf.*

Serratula. C. B. P. *Saw-wort.*

Serratula flore candido. C. B. P. *Saw-wort with a white Flower.*

Sium aromaticum, sison officinarum. Inst. R. H. *Bastard-bone Parsnip.*

Smilax unifolia humillima. Inst. R. H. *One-blade.*

Smilax aspera, fructu rubente. C. B. P. *Rough Bindweed with reddish Berries.*

Smilax aspera, minus spinosa, fructu nigro. C. B. P. *Rough Bindweed, with black Berries.*

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Smilax

A D D E N D A.

Smilax viticulis asperis, foliis longis angustis mucronatis lævibus, auriculis ad basim rotundioribus. Pluk. Phyt. *Rough-stalk'd Bindweed, with long narrow smooth Leaves, having round Ears at their Base.*

Smilax foliis latis, in margine spinosis, Caroliniana, stipite leni quadrato. Pluk. Phyt. *Rough-bindweed, with broad Leaves from Carolina.*

Solanum scandens, seu dulcamara. C. B. P. *Woody-nightshade or Bitter-sweet.*

Solanum scandens, seu dulcamara, flore albo. C. B. P. *Woody-nightshade with a white Flower.*

Tamnus racemosa, flore minore luteo-palescente. Inst. R. H. *The Male black Briony, with a small yellowish Flower.*

Tamnus baccifera, flore majore albo. Inst. R. H. *The Female or berry-bearing black Briony.*

Tanacetum vulgare luteum. C. B. P. *Common Tansy.*

Tithymalus characias amygdaloides. C. B. P. *Wood Spurge.*

Tithymalus marinus, folio retuso, Terracensis. Bar. Obs. *Sea-spurge with a broad blunt Leaf.*

Tithymalus foliis pini, fortè Dioscoridis pityusa. C. B. P. *Pine-leav'd Spurge.*

Tormentilla sylvestris. C. B. P. *Tormentil.*

Valeriana sylvestris major montana. C. B. P. *Wild mountain Valerian.*

Veronica mas supina & vulgarissima. C. B. P. *Male Speedwell.*

Veronica chamædrys sylvestris dicta. Raii Syn. *Wild Germander or Speedwell.*

Vicia multiflora. C. B. P. *Many-flower'd Vetch.*

Vicia sylvatica multiflora maxima. Phyt. Brit. *The greatest many-flower'd Wood-vetch.*

Viola Martia purpurea, flore simplici odoro. C. B. P. *Common Violet.*

Viola Martia alba. C. B. P. *The white Violet.*

Viola Martia, obsoleto flore. Park. *Violet with a purplish Flower.*

Viola Martia major hirsuta inodora. Mor. Hist. *Great hairy Violet without Scent.*

Viola Martia inodora sylvestris. C. B. P. *Dog Violet.*

Virga aurea vulgaris. Park. Theat. *Common Golden-rod.*

In this List there are many Plants enumerated, which are esteemed common Weeds, having little Beauty either in their Leaves or Flowers, so would be by many Persons rejected. But as these are designed to grow in such close shady Places, where better Plants will not thrive, so they are not to be despised, since any thing green appears much better, than the Sight of the naked Ground under Trees; therefore it is I have mentioned them. As these are most of them to be found in the Woods in England, so from thence their Roots may be transplanted at Michaelmas; and when they have once taken Root, they will spread and multiply exceedingly without any Care; some by their creeping Roots, and others from their Seeds, which will scatter on the Ground. Most of these Plants will thrive better on a pretty strong poor Soil, than in light rich Land.

A CATALOGUE of such TALL FLOWERING PLANTS as will thrive under large Trees in open Groves, or on the Sides of Wilderness Walks, where they are not too closely shaded by the Trees.

A *Canthus fativus, vel mollis Virgilii.* C. B. P. *Garden Bearsbreech.*

Acanthus aculeatus. C. B. P. *The prickly Bearsbreech.*

Acanthus Lusitanicus, amplissimo folio lucido. Jessieu. Portugal *Bearsbreech, with a large shining Leaf.*

Acanthus rarioribus & brevioribus aculeis muritus. Inst. R. H. *Bearsbreech armed with shorter Prickles.*

Aconitum lycoctonum luteum. C. B. P. *Yellow Wolfsbane.*

Aconitum Pyrenaicum, ampliore folio tenuius laciniato. Inst. R. H. *Pyrenean Monks-hood, with a larger Leaf finely jagged.*

Aconitum violaceum seu napellus secundus. C. B. P. *Violet-coloured Wolfsbane, or Monks-hood.*

Aquilegia hortenensis multiplex, flore magno cœruleo. C. B. P. *Double garden Columbine, with a large blue Flower.*

Aquilegia hortenensis multiplex, flore magno variegato. C. B. P. *Double garden Columbine, with a large variegated Flower.*

Asphodelus albus ramosus mas. C. B. P. *White branched Kingspear.*

Asphodelus albus ramosus minor, seu ramosus alter. H. R. Par. *Smaller branching white Kingspear.*

Aspho-

A D D E N D A.

Asphodelus albus non ramosus. C. B. P. *White unbranched Kingspear.*

Asphodelus luteus & flore & radice. C. B. P. *Yellow Kingspear.*

After *Novæ Angliæ umbellatus*, floribus dilutè violaceis. H. L. *New-England Starwort, with violet-coloured Flowers growing in an Umbel.*

After *Novæ Angliæ latifolius paniculatus*, floribus saturatè violaceis. H. L. *Broad-leav'd New-England Starwort, with dark violet-coloured Flowers, growing in a Panicle.*

After *Americanus latifolius*, puniceis caulibus. H. L. *Broad-leav'd American Starwort, with red Stalks.*

After *cœruleus ferotinus frutescens Tradescanti*. Raii Hist. *Late blue shrubby Starwort of Tradescant.*

After *Virginianus ferotinus*, parvo albente flore. Park. *Late Virginia Starwort, with a small white Flower.*

After *Americanus*, belvideræ foliis, floribus ex cœruleo albicantibus, spicis prælongis. Pluk. Alm. *American Starwort, with Summer Cypress Leaves, and long Spikes of blueish-white Flowers.*

Centaurium majus, folio in lacinias plures diviso. C. B. P. *Greater Centaury, with a Leaf divided into many Parts.*

Centaurium foliis cinaræ. Cornut. *Greater Centaury, with Artichoke-leaves.*

Centaurium Alpinum luteum. C. B. P. *Yellow Alpine Centaury.*

Chamænerion latifolium vulgare. Inst. R. H. *The French Willow, vulgò.*

Chamænerion latifolium vulgare, flore albo. Inst. R. H. *The French Willow, with a white Flower.*

Corona imperialis, flore pulchrè rubente. Inst. R. H. *Crown Imperial, with a fine reddish Flower.*

Corona imperialis, flore è luteo pallescente. Inst. R. H. *Crown Imperial, with a pale yellow Flower.*

Corona imperialis, flore luteo striato. Inst. R. H. *Crown Imperial, with a yellow-strip'd Flower.*

Corona imperialis major. Inst. R. H. *The larger Crown Imperial.*

Corona imperialis, duplici coronâ. Inst. R. H. *The Crown Imperial, with a double Crown of Flowers.*

Corona imperialis, flore pleno. Inst. R. H. *Crown Imperial, with a double Flower.*

Corona solis perennis & vulgaris. Vaill. *The Everlasting Sun-flower.*

Corona solistrachelii folio, radice repente. Inst. R. H. *Sun-flower with a throatwort Leaf, and a creeping Root.*

Corona solis altissima, vofacan dicta. Vaill. *The tallest Sun-flower called Vofacan.*

Corona solis altissima, caule alato. Inst. R. H. *The tallest Sun-flower, with a winged Stalk.*

Corona solis foliis asperis, tribus vel quaternis ad genicula sitis. Mor. Hist. *Sun-flower with rough Leaves, growing by Threes or Fours at each Knot.*

Corona folis foliis amplioribus laciniatis. Inst. R. H. *Sun-flower with larger jagged Leaves.*

Corona folis foliis angustioribus laciniatis. Inst. R. H. *Sun-flower with narrower jagged Leaves.*

Doria Narbonensium. H. Eyst. *The Narbonne Doria or Ragwort.*

Doria quæ jacobæa, foliis integris & mucronatis. Mor. Hist. *Doria or Ragwort, with intire pointed Leaves.*

Doria quæ jacobæa orientalis, limonii folio. Tourn. Cor. *Eastern Doria with a sea-lavender Leaf.*

Echinopus major. J. B. *The Globe Thistle.*

Eupatorium cannabinum. C. B. P. *Hemp Agrimony.*

Eupatorium folio oblongo rugoso, caule purpurascente. Inst. R. H. *Hemp Agrimony, with an oblong rough Leaf, and a purplish Stalk.*

Eupatorium Novæ Angliæ urticæ foliis, floribus purpurascens, maculato caule. Par. Bat. *New-England Hemp Agrimony, with Nettle Leaves, and a spotted Stalk.*

Gladiolus major Byzantinus. C. B. P. *The great Corn-flag of Constantinople.*

Gladiolus utrimque floridus. C. B. P. *Corn-flag with Flowers growing on every Side of the Stalk.*

Gladiolus floribus uno versu dispositis, major & procerior, flore purpureo-rubente. C. B. P. *Greater Corn-flag with purplish red Flowers growing on one Side of the Stalk.*

Iris vulgaris violacea, five purpurea sylvestris. J. B. *The common blue Flower-de-luce.*

Iris hortensis latifolia. C. B. P. *The broad-leav'd garden Flower-de-luce.*

Iris palustris lutea. Tab. Icon. *Yellow marsh Flower-de-luce.*

Lilium album, flore erecto, & vulgare. C. B. P. *The common white Lily.*

Lilium album, floribus dependentibus, five peregrinum. C. B. P. *The Foreign white Lily, with Flowers hanging downward.*

Lilium floribus reflexis, montanum, flore rubente. C. B. P. *The Martagon or Turks-cap, with a reddish Flower.*

Lilium floribus reflexis, montanum, flore pleno. H. R. Monsp. *The double Martagon.*

Lilium floribus reflexis, montanum, flore albicante. C. B. P. *The white Martagon.*

Lilium floribus reflexis, montanum, flore maculis rubris inordinatis asperfo. C. B. P. *The spotted Martagon.*

Lilium floribus reflexis, flore flavo, maculis nigris asperfo. *The yellow spotted Martagon.*

Lyfimachia lutea major, quæ Dioscoridis. C. B. P. *Yellow Loosestrife.*

Lyfima-

A D D E N D A.

Lyfimachia Canadensis, folio jalappæ. Cornut. Canada Loofestrife.

Malva rosea. C. B. P. *The Holly-hock of all Sorts.*

Narcissus. *Daffodils of most Sorts.*

Pæonia formina, flore pleno rubro majore. C. B. P. *The great double red Piony.*

Pæonia flore exalbido pleno, major. C. B. P. *The great double Piony, with a pale Flower.*

Pæonia flore pleno rubro minore. C. B. P. *The small double red Piony.*

Polygonatum latifolium, hellebori albi foliis. C. B. P. *Broad-leav'd Solomon's-seal, with white Hellebore-leaves.*

Polygonatum latifolium, flore duplici odore. H. R. Par. *Broad-leav'd Solomon's-seal, with a double sweet Flower.*

Ruscus myrtifolius aculeatus. Inst. R. H. *Kneebolm or Butchers-broom.*

Ruscus latifolius, fructu folio innascente. Inst. R. H. *Broad-leav'd Alexandrian Laurel, with the Fruit growing on the Leaf.*

Ruscus angustifolius, fructu folio innascente. Inst. R. H. *Narrow-leav'd Alexandrian Laurel, with the Fruit growing on the Leaf.*

Ruscus angustifolius, fructu summis ramulis innascente. Inst. R. H. *Narrow-leav'd Alexandrian Laurel, with Fruit growing at the Ends of the Branches.*

Valeriana hortensis, phu folio olusatri Dioscoridis. C. B. P. *Garden Valerian, or Phu of Dioscorides.*

Veronica major latifolia erecta. Mor. Hist. *Greater broad-leav'd upright Speedwell.*

Veronica erecta angustifolia. Park. Theat. *Upright narrow-leav'd Speedwell.*

Veronica multicaulis Pannonica. Inst. R. H. *Hungarian Speedwell with many Spikes.*

Virga aurea Novæ Angliæ altissima, paniculis nonnunquam reflexis. Flor. Bat. *The tallest New-England Golden-rod, with bending Spikes.*

Virga aurea altissima ferotina, paniculâ speciosâ patulâ. Rand. *The tallest late-flowering Golden-rod, with a specious spreading Spike.*

Virga aurea Marylandica, spicis florum racemosis, foliis integris scabris. Martyn. *Maryland Golden-rod, with branching Spikes of Flowers, and intire rough Leaves.*

Virga aurea Virginiana, foliis angustioribus asperis, paniculâ minus speciosâ. Pluk. Alm. *Virginian Golden-rod, with rough narrow Leaves, and a less specious Panicle.*

Virga aurea rugosis foliis, Virginiana, paniculâ florum amplissimâ. Pluk. *Rough-leav'd Virginia Golden-rod, with the largest Panicles of Flowers.*

Virga aurea Canadensis, asterisci folio. Par. Bat. *Canada Golden-rod, with an Asteriscus-leaf.*

Virga aurea Americana ferrata, floribus ad foliorum alas conglobatis. Breyn. prod. *American saw'd Golden-rod, with Flowers growing in Clusters from the Wings of the Leaves.*

Virga aurea Noveboracensis glabra, caulibus rubentibus, foliis angustis glabris. Flor. Bat. *Smooth New-England Golden-rod, with red Stalks, and narrow smooth Leaves.*

Virga aurea floribus fistulosis, senecionis instar, foliis angustioribus non ferratis. Hist. Ox. *Golden-rod with piped Flowers resembling Groundsel, and narrow intire Leaves.*

Virga aurea Novæ Angliæ, foliis longissimis glabris. Flor. Bat. *New-England Golden-rod, with very long smooth Leaves.*

These Plants having abiding Roots, when they are well established in the Ground, will maintain themselves without Care, and only require to have the great Weeds kept down from overspreading them; and if the Ground is dug about them every Spring, it will cause them to flower strong.

A C A T A-

A D D E N D A.

A CATALOGUE of such PLANTS as will not live in the open Air in Winter, but only require to be protected from severe Frost ; therefore should have as much free Air as possible in mild Weather.

A Cetosa arborescens, subrotundo folio, ex
Insulis Fortunatis. Pluk. Phyt. *The Sor-
rel-tree.*

Adhatoda Zeylanensium. H. L. *The Ma-
labar-nut.*

Adhatoda Indica, folio saligno, flore albo.
Boerh. Ind. *The Snap-tree.*

Alaternoides Africana, lauri serratae folio.
Com. Præl. African *Bastard-alaternus*, with
a saw'd Bay-leaf.

Alaternoides Africana, ericæ foliis, floribus
albicantibus & muscosis. H. A. African *Ba-
stard-alaternus*, with beath Leaves and white
Flowers.

Alaternoides Africana, telephii legitimi im-
perati folio, flore viridi. H. A. African *Ba-
stard-alaternus*, with a true Orpine-leaf, and a
green Flower.

Alcea Afra frutescens, folio grossulariæ,
flore parvo rubro. Boerh. Ind. alt. *Shrubby
African Vervain-mallow*, with a Gooseberry-
leaf, and a small red Flower.

Alkekengi fructu parvo verticillato. Inst.
R. H. *Shrubby Winter-cherry*, with small Fruit
growing in Whorles.

Aloe Americana muricata. J. B. *The com-
mon American Aloe.*

Anemonospermos Africana, folio jacobææ,
flore luteo extus puniceo. Boerh. Ind. African
Anemonospermos, with a Ragwort-leaf, and a
yellow Flower, of a reddish Colour on the Out-
side.

Anemonospermos Africana, cardui benedicti
folio, florum radiis intus albicantibus. H. A.
African *Anemonospermos*, with a Carduus-leaf,
and the Rays of the Flowers white on their
Inside.

Anemonospermos Afra, folio jacobææ tenu-
iter laciniato, flore aurantio pulcherrimo.
Boerh. Ind. alt. African *Anemonospermos*,
with a finely jagged Ragwort-leaf, and a beau-
tiful orange-colour'd Flower.

Anemonospermos Afra, folio oblongo ser-
rato rigido, flore intus sulphureo, extus puni-
ceo. Boerh. Ind. alt. African *Anemonosper-
mos*, with an oblong stiff sawed Leaf, and a
Flower of a Brimstone-colour within, and pur-
plish on the Outside.

Apocynum erectum fruticosum, folio sub-
rotundo viridante. Par. Bat. *Upright shrubby
Dogbane*, with a roundish green Leaf.

Apocynum erectum Africanum, folio salicis
angusto glabro, fructu villoso. Par. Bat. *Up-
right African Dogbane*, with a narrow smooth
Willow-leaf, and a bairy Fruit.

Apocynum Afrum scandens, folio rotundo
subincano nummulariæ. Boerh. Ind. alt. *Climb-
ing African Dogbane*, with an herb-two-pence
Leaf whitish underneath.

Aristolochia pistolochia dicta. C. B. P. Ever-
green Birthwort.

Aristolochia pistolochia altera. J. B. *Ano-
ther ever-green Birthwort.*

Aristolochia violæ fruticosæ foliis Virginiana,
cujus radix serpentaria dicitur. Pluk. Phyt.
The Virginia Snakeroot.

Arum Africanum, flore albo odorato. Par.
Bat. prod. African *Arum*, with a white sweet
Flower.

Arundo Indica variegata, seu Laconica Theo-
phraستي. C. B. P. *The strip'd Cane.*

Ascyron Balearicum frutescens, maximo
flore luteo, foliis minoribus subtus verrucosis.
Salvador. *Shrubby St. Peter'swort*, with a large
yellow Flower, and very small warted Leaves.

Asparagus aculeatus, spinis horridus. C. B.
P. *Prickly Asparagus.*

Asparagus Africanus scandens, myrti folio
angustiore. Hort. Piss. *Climbing African As-
paragus*, with a narrow Myrtle-leaf.

Asparagus Africanus tenuifolius, viminali-
bus virgis, foliis laricis instar ex uno puncto
numerosis, stellatim dispositis. Pluk. Al. *Nar-
row-leav'd African Asparagus*, with slender
Shoots, and Leaves like the Larch-tree, arising
many from one Centre, which expand like
a Star.

Asteriscus frutescens, leucii foliis sericeis
& incanis. Hort. Elth. *Shrubby Asteriscus*,
with silvery Leaves.

Asteriscus frutescens, leucii foliis viridibus
& splendentibus. Hort. Elth. *Shrubby As-
teriscus*, with shining green Leaves.

Barba Jovis pulchrè lucens. J. B. *Jupiters-
beard or Silver-bush.*

Barba Jovis Africana, foliis viridibus pin-
natis, flore cœruleo. Boerh. Ind. alt. African
Jupiters-beard, with green winged Leaves, and
a blue Flower.

A D D E N D A.

Barba Jovis Græca, linariæ folio argenteo, ampliori flore luteo parvo. Tourn. Cor. Greek *Jupiters-beard*, with a broad silvery toad-flax Leaf, and a small yellow Flower.

Bryonia Africana glabra, foliis in profundas lacinias divisis, flore luteo. Olden. Smooth African *Briony*, with Leaves deeply jagged, and a yellow Flower.

Calamintha incana, ocymi foliis. C. B. P. Hoary *Calaminth*, with Basil-leaves.

Caltha Africana, foliis croci angustis, florum petalis externè purpurascens, internè albis. Boerh. Ind. alt. African *Marygold* with narrow Saffron-leaves, and Flowers whose Petals are purple on their Outside, and white within.

Calthoides Africana, glasti folio. Jessieu. African *Bastard-marygold*, with a Woad-leaf.

Carnacorus latifolius vulgaris. Inst. R. H. Common broad-leav'd Indian Reed.

Chenopodium ambrosioides Mexicanum. Inst. R. H. Oak of Jerusalem, vulgò.

Chenopodium ambrosioides Mexicanum fruticosum. Boerh. Ind. alt. Shrubby Oak of Jerusalem, vulgò.

Chenopodium sempervirens, foliis tenuiter laciniatis. Hort. Elth. Ever-green Oak of Jerusalem, with finely jagged Leaves.

Chrysanthemoides Africanum, populi albæ foliis. Mem. Acad. Scien. African hard-seeded *Chrysanthemum*, with white Poplar-leaves.

Cistus ladanifera Hispanica, falcis folio, flore candido. Inst. R. H. Spanish Gum-cistus, with a white Flower.

Cistus ladanifera Hispanica, falcis folio, flore albo maculâ punicante insignito. Inst. R. H. Willow-leav'd Spanish Gum-cistus, with a spotted Flower.

Cistus foemina, folio salviæ, elatior & rectus virgis. C. B. P. Broad-leaved Gum-cistus, vulgò.

Cistus ledon, foliis populi nigræ, major. C. B. P. Great Gum-cistus, with black Poplar-leaves.

Cistus ledon, foliis populi nigræ, minor. C. B. P. Small Gum-cistus, with black Poplar-leaves.

Cistus ledon latifolium Creticum. J. B. Broad-leav'd Gum-cistus of Crete.

Cistus ledon hirsutum. C. B. P. Hairy Gum-cistus.

Clusia Æthiopica frutescens, portulacæ folio, flore ex albido virescente. Boerh. Ind. alt. Shrubby Æthiopian *Clusia*, with a Purslane-leaf, and a greenish-white Flower.

Colutea Æthiopica, flore phœnicio, folio barbæ Jovis. Breyn. Cent. Æthiopian *Bladder-fenna*, with a scarlet Flower, and a silver-bush Leaf.

Coma aurea Africana fruticans, foliis linariæ angustis, major. Hort. Amst. Shrubby African *Goldyllocks*, with narrow toad-flax Leaves.

Coma aurea Africana fruticans, foliis glaucis in extremitate trifidis. Hort. Amst. Shrubby African *Goldyllocks*, with sea-green Leaves divided into three Parts at their Extremities.

Coma aurea Africana fruticans, foliis crithmi marini. Hort. Amst. Shrubby African *Goldyllocks*, with Sampire-leaves.

Coma aurea Africana fruticans, foliis glaucis longis tenuibus multifidis, apice pinnularum trifido. Boerh. Ind. alt. Shrubby African *Goldyllocks*, with long narrow Leaves divided into many Parts, each being trifid.

Convolvulus major rectus Creticus argenteus. Mor. Hist. Great upright *Convolvulus*, with silvery Leaves.

Convolvulus Canariensis sempervirens, folio molli incano, flore ex albo purpurascens. Hort. Amst. Ever-green Canary *Bindweed*, with a Sage-leaf, and a purplish Flower.

Conyza Africana frutescens, foliis salviæ, odore camphoræ. Inst. R. H. African shrubby *Fleabane*, with a Sage-leaf smelling like Rosemary.

Cyclamen hyeme & vere florens, folio anguloso, amplo flore albo, basi purpureâ, Persicum dictum. H. R. Par. The Persian *Sowbread*, with a large white Flower having a purple Bottom.

Cyclamen hyeme & vere florens, folio anguloso, amplo flore carneo, basi purpureâ. H. R. Par. Persian *Sowbread*, with a large flesh-coloured Flower, having a purple Bottom.

Cytisus hirsutus. J. B. Hairy *Tree-trefoil*.

Cytisus spinosus. H. L. Prickly base *Tree-trefoil*.

Cytisus minoribus foliis, ramulis tenellis villosis. C. B. P. Woolly base *Tree-trefoil*, with very small Leaves.

Cytisus Monspeffulanus, medicæ folio, siliquis dense congestis & villosis. Inst. R. H. Montpellier base *Tree-trefoil*, with thick hairy Pods growing in Clusters.

Cytisus foliis argenteis. Wheel. Itin. Silvery-leav'd base *Tree-trefoil*.

Cytisus Africanus hirsutus angustifolius. Old. Narrow-leav'd hairy African base *Tree-trefoil*.

Cytisus Africanus argenteus, flore atro purpureo. Old. Silvery African base *Tree-trefoil*, with a dark purple Flower.

Cytisus spinosus, siliquâ villosâ incanâ. Tourn. Cor. Prickly base *Tree-trefoil*, with hoary Pods.

Dictamnus Creticus. C. B. P. Dittany of Crete.

Dictamnus Montis Sipyli, origani foliis. Flor. Bat. Dittany of Mount Sipyli, with wild Marjoram-leaves.

Doria Africana arborescens, crassis & succulentis foliis atriplicem referentibus. Boerh. Ind. alt. Shrubby African *Doria*, with fleshy Leaves like those of Orach.

Doria quæ jacobæa Africana frutescens, coronopi folio. Hort. Amst. African shrubby *Doria*, with a bucks-horn Leaf.

Doria quæ jacobæa Africana, hederæ terrestri folio, repens. Hort. Amst. African trailing *Doria*, with a ground-ivy Leaf.

Elichry-

A D D E N D A.

Elichrysum orientale. C. B. P. *The yellow Everlasting-flower*, vulgò.

Elichrysum Africanum, folio oblongo, sub-
tus cano, supra viridi, flore luteo. Boerh. Ind.
alt. *African Eternal*, with an oblong Leaf,
white underneath, and a yellow Flower.

Elichrysum Africanum, folio oblongo an-
gusto, flore rubello, postea aureo. Boerh.
Ind. alt. *African Eternal*, with a narrow ob-
long Leaf, and a reddish Flower, which afterward
changes yellow.

Euonymo adfinis *Æthiopica* sempervirens,
fructu globoso scabro, foliis salicis rigidis ser-
ratis. H. L. *Ever-green Æthiopian Spindle-*
tree, with a rough globular Fruit, and a stiff
sawed Willow-leaf.

Eupatorium Americanum scandens, hastato
magis acuminato folio. Vaill. *Climbing Ame-*
rican Hemp-agrimony, with a spear-shap'd Leaf.

Eupatorium Americanum, teucris folio, flore
niveo. Vaill. *American Hemp-agrimony*, with
a Germander-leaf, and a snowy Flower.

Fabago Africana arborescens, flore sulphu-
reo, fructu rotundo. Com. Rar. *African Tree-*
bean-caper, with a Brimstone-flower, and a round
Fruit.

Fabago Afra frutescens minor, flore flavo
magno, unguibus petalorum fuscis. Boerh.
Ind. alt. *Smaller Shrubby Bean-caper*, with a
large yellow Flower, having dark Spots in the
Bottom.

Frangula sempervirens, folio rigido subro-
tundo. Hort. Elth. *Ever-green berry-bearing-*
alder, with a stiff roundish Leaf.

Geranium Africanum arborescens, ibisci fo-
lio rotundo, carlinæ odore. H. L. *African*
Tree Cranesbill, with a round Mallow-leaf,
smelling like the Carline-thistle.

Geranium Africanum arborescens, ibisci fo-
lio anguloso, flore amplo purpureo. Aët. Phil.
African Tree Cranesbill, with an angular Mal-
low-leaf, and a large purple Flower.

Geranium Africanum arborescens, alchi-
millæ hirsuto folio, floribus rubicundis. Com.
Præl. *African Tree Cranesbill*, with a hairy
Ladies-mantle-leaf, and reddish Flowers.

Geranium Africanum arborescens, alchimillæ
hirsuto folio elegantissimè variegato, floribus
rubicundis. Com. Præl. *African Tree Cranes-*
bill, with a hairy Ladies-mantle-leaf, curiously
variegated, and red Flowers.

Geranium Africanum arborescens, malvæ
folio plano lucido, flore elegantissimo kermes-
fino. Di Van Leur. Boerh. Ind. *The scarlet*
Geranium, vulgò.

Geranium Africanum frutescens, malvæ fo-
lio odorato laciniato. H. L. *Shrubby African*
Cranesbill, with a jagged sweet-scented Mallow-
leaf.

Geranium Africanum frutescens, malvæ fo-
lio laciniato, odorato instar melissæ, flore pur-
purascens. H. L. *Shrubby African Cranesbill*,
with a jagged Mallow-leaf smelling like Balm,
and a purplish Flower.

Geranium Africanum frutescens, folio crasso
& glauco, acetosæ sapore. Com. Præl. *Shrubby*
African Cranesbill, with a fleshy sea-green Leaf,
tasting like Sorrel.

Geranium Africanum, folio alceæ, flore coc-
cineo fulgidissimo. Boerh. Ind. *African Cranes-*
bill, with a Vervain-mallow-leaf, and a deep
scarlet Flower.

Geranium Africanum, foliis inferioribus asari,
superioribus staphidis agricæ maculatis splenden-
tibus, & acetosæ sapore. Com. Præl. *African*
Cranesbill, whose upper Leaves are like Asa-
rabacca, and the under Leaves like Staves-
acre.

Geranium Africanum, alchimillæ hirsuto
folio, floribus albidis. H. L. *African Cranesbill*,
with a hairy Ladies-mantle-leaf, and whitish
Flowers.

Geranium Africanum, folio malvæ crasso
molli odoratissimo, flosculo albo. Boerh. Ind.
alt. *African Cranesbill*, with a thick soft
sweet-scented Mallow-leaf, and a small white
Flower.

Geranium Africanum arborescens, malvæ
folio mucronato, petalis florum inferioribus vix
conspicuis. Aët. Phil. *African Tree Cranesbill*,
with a pointed Mallow-leaf, and the two under
Petals of the Flower scarce discernible.

Geranium Africanum frutescens, chelidonii
folio, petalis florum angustis albidis, caudice
carnoso. Aët. Phil. *Shrubby African Cranesbill*,
with a Celandine-leaf, and a fleshy Stalk.

Geranium Africanum noctu olens, tubero-
sum & nodosum, aquilegiæ foliis. H. L. *Night-*
smelling African knobby Cranesbill, with Co-
lumbine-leaves.

Geranium Africanum noctu olens, radice
tuberosâ, triste. Corn. *Night-smelling African*
Cranesbill, with a tuberous Root.

Geranium Africanum noctu olens, radice
tuberosâ, foliis pastinacæ incanis lanuginosis
angustioribus, flore pallide flavescens. H.
L. *Night-smelling African Cranesbill*, with
narrow hoary Carrot-leaves, and a yellowish
Flower.

Geranium Africanum noctu olens, folio vitis
hirsuto, tuberosum. Hort. Amst. *Tuberous*
African night-smelling Cranesbill, with a hairy
Vine-leaf.

Guidonia ulmi foliis, flore roseo. Plum.
Nov. Gen. *Guidonia* with Elm-leaves, and a
Rose-flower.

Heliotropium Canariense arborescens, sco-
rodoniæ folio. Hort. Amst. *Tree Canary*
Turnsole, with a wood-sage Leaf.

Heliotropium arborescens, folio teucris, flore
albo, in capitula densa congesto. Boerh. Ind.
alt. *Tree-turnsole* with a Germander-leaf, and a
white Flower, collected in a thick Head.

Hermannia frutescens, folio oblongo serrato.
Inst. R. H. *Shrubby Hermannia*, with an ob-
long saw'd Leaf.

Hermannia frutescens, folio oblongo serrato
latiori. Boerh. Ind. *Shrubby Hermannia*, with
a broader sawed Leaf.

Her-

A D D E N D A.

Hermannia frutescens, folio ibisci hirsuto molli, caule piloso. Boerh. Ind. *Sbrubby Hermannia*, with a soft hairy Mallow-leaf, and a hairy Stalk.

Hermannia frutescens, folio grossulariæ parvo hirsuto. Boerh. Ind. alt. *Sbrubby Hermannia*, with a small hairy Gooseberry-leaf.

Hermannia frutescens, folio lavendulæ latiori & obtuso, flore parvo aureo. Boerh. Ind. alt. *Sbrubby Hermannia*, with a broad and blunt Lavender-leaf, and a small golden Flower.

Jacea Epidaurica, candidissima & tomentosa. Inst. R. H. *White woolly Knapweed*.

Jacobæa Africana frutescens, foliis incisiss & subtus cineraceis. Com. Prælud. *Sbrubby African Ragwort*, with cut Leaves, which are ash-coloured on their Underside.

Jasminum Hispanicum, flore majore, externe rubente. J. B. *The Spanish Jasmine*.

Jasminum Azoricum trifoliatum, flore albo odoratissimo. H. Amst. *The ivy-leav'd Azorian Jasmine*.

Jasminum Africanum, folio ilicis, flore solitario, ex alis foliorum proveniente, albo. Com. Præl. *African Jasmine*, with an Ilex-leaf.

Laurus latifolia πλατύτερα Dioscoridis. C. B. P. *The broad-leav'd Indian Bay*.

Laurus Indica. Ald. Hort. *The Royal-bay*, vulgò.

Laurus tenuifolia. Tab. Icon. *The narrow-leav'd Bay*.

Lentiscus vulgaris. C. B. P. *The Mastick-tree*.

Leonurus perennis Africanus, fideritidis folio, flore phœnicio majore. Breyn. prod. *African Lions-tail*, with a large red Flower.

Leonurus minor, Capitis Bonæ Spei, vulgò. Boerh. Ind. alt. *The smaller Lions-tail*, from the Cape of Good Hope.

Leonurus perennis Africanus, fideritidis folio variegato, flore phœnicio majore. *The strip'd Leonurus*, or *Lions-tail*.

Leucanthemum Canariense, foliis chrysanthemi, pyrethri sapore. Inst. R. H. *Canary Ox-eye-daisy*, commonly called *Pellitory of Spain*.

Limonium Siculum lignosum, gallas ferens & non ferens. Bocc. Rar. Plant. *Sbrubby Sea-lavender of Sicily*.

Limonium Ægyptiacum lignosum, halimi folio. Jessieu. *Ægyptian woody Sea-lavender*, with a sea-purslane Leaf.

Lotus polyceratos fruticosa Cretica argentea, siliquis longissimis propendentibus rectis. Mor. Hist. *Sbrubby silvery Lotus of Crete*, with very long Pods.

Majorana rotundifolia scutellata exotica. H. R. Par. *Round-leav'd foreign Marjoram*.

Marrubium Hispanicum supinum, calyce

stellato & aculeato. Inst. R. H. *Low Spanish Hore-bound*, with a starry and prickly Empalement.

Marum Syriacum vel Creticum. H. L. *The Syrian Marum or Cats-thyme*.

Medicago trifolia frutescens incana. Inst. R. H. *Hoary sbrubby Moon-trefoil*.

Moldavica Americana trifolia, odore gravi. Inst. R. H. *Three-leav'd Moldavian Balm*, commonly called *Balm of Gilead*.

Nerium floribus rubescentibus. C. B. P. *The red Oleander, or Rose-bay*.

Nerium floribus albis. C. B. P. *The white Oleander, or Rose-bay*.

Polygala Africana frutescens, buxi folio, maximo flore. Olden. *Sbrubby African Milk-wort*, with a Box-leaf, and a large Flower.

Ptarmica incana, pinnulis cristatis. Tourn. Cor. *Hoary Sneezwort*, with crested Wings to the Leaves.

Ptarmica orientalis, foliis cristatis. Tourn. Cor. *Eastern Sneezwort*, with crested Leaves.

Ptarmica orientalis, santolinæ folio, flore majore. Tourn. Cor. *Eastern Sneezwort*, with a lavender-cotton Leaf, and a larger Flower.

Ptarmica orientalis, foliis tanacetii incanis, flore aureo. Tourn. Cor. *Eastern Sneezwort*, with hoary Tansey-leaves, and a golden Flower.

Ptarmica orientalis, foliis argenteis conjugatis. Tourn. Cor. *Eastern Sneezwort*, with silvery Leaves growing opposite.

Ptarmica Cretica frutescens, santolinæ facie. Inst. R. H. *Sbrubby Sneezwort of Crete*, with the Face of Lavender-cotton.

Rapuntium maximum, coccineo spicato flore. Col. in Recc. *Great scarlet Cardinal-flower*.

Rapuntium Americanum, flore dilutè cœruleo. Acad. Reg. S. *The blue Cardinal-flower*.

Rhus Africanum trifoliatum majus, foliis subtus argenteis acutis margine incisiss. Pluk. Phyt. *Three-leav'd African Sumach*, with Leaves which are whitish on their Undersides, and cut sharply on their Edges.

Rhus Africanum trifoliatum minus glabrum, splendente folio subrotundo integro, fortè lentiscus Africanus triphyllus quorundam. Pluk. Phyt. *Lesser three-leav'd African Sumach*, with a smooth shining roundish Leaf.

Rhus Africanum trifoliatum majus, folio subrotundo integro. *Greater three-leav'd African Sumach*, with a roundish intire Leaf.

Ruscus latifolius, foliorum sinu florifer & fructifer. Hort. Elth. *Broad-leav'd Alexandrian Laurel*, bearing Flowers and Fruit on the Edges of the Leaves.

Salvia

A D D E N D A.

Salvia orientalis latifolia, absinthium redo-
lens, flore carneo magno. Boerh. Ind. alt.
*Broad-leav'd eastern Wormwood-sage, with a
large flesh coloured Flower.*

Salvia Africana frutescens, folio subrotundo
glauco, flore aureo magno. Hort. Amst.
*Shrubby African Sage, with a roundish sea-green
Leaf, and a large golden Flower.*

Salvia Africana frutescens, folio scorodoniæ,
flore violaceo. Hort. Amst. *Shrubby African
Sage, with a wood-sage Leaf, and a violet-co-
loured Flower.*

Scabiosa Africana frutescens. Par. Bat. Afri-
can *Tree Scabious*.

Scabiosa stellata, folio non dissecto. C. B. P.
Starry Scabious, with an undivided Leaf.

Scabiosa Sicula fruticans, laureolæ folio sub-
tus incano. Inst. R. H. *Shrubby Sicilian
Scabious, with a spurge-laurel Leaf, hoary on
the Underside.*

Scilla vulgaris, radice rubra. C. B. P. *The
red Squill, or Sea-onion.*

Scilla radice albâ. C. B. P. *The white Squill,
or Sea-onion.*

Senecio Africanus, folio retuso. Hort. Cath.
African Groundsel, with a blunt Leaf.

Senecio Africanus arborescens, folio serrato.
Boerh. Ind. alt. *African Tree-groundsel, with
a sawed Leaf.*

Siliqua edulis. C. B. P. *The Carob, or St.
John's-bread.*

Solanum pomiferum frutescens Africanum
spinofum nigricans, boraginis flore, foliis pro-
funde laciniatis. H. L. *Shrubby African
Nightshade, commonly called Pomum Amoris.*

*Solanum dulcamarum scandens Africa-
num*, foliis crassis hirsutis. Hort. Elth. *Climb-
ing African Nightshade, with thick hairy
Leaves.*

Solanum fruticosum bacciferum. C. B. P.
*Shrubby berry-bearing Nightshade, commonly
called Amomum Plinii.*

Spartium tertium, flore albo. C. B. P. *The
white Spanish Broom.*

Spartium orientale humile, fructu villoso &
rostrato. Tourn. Cor. *Dwarf eastern Broom,
with a hoary beak'd Fruit.*

Spartium orientale, siliquâ compressâ glabrâ
& annulatâ. Tourn. Cor. *Eastern Broom,
with a smooth flat round Pod.*

Spirea Africana, foliis pilosis. Com. Rar.
Plant. *African Spirea, with hairy Leaves.*

Staphylodendron Africanum, folio singulari
lucido. Par. Bat. *African Bladder-nut, with
a single shining Leaf.*

Styrax folio mali cotonei. C. B. P. *The true
Storax-tree.*

Tanacetum Africanum arborescens, foliis
lavendulæ, multifido folio. Hort. Amst.
*African Tree-tansy, with Leaves like the
multifid Lavender.*

*Tanacetum Africanum fruticans multiflo-
rum*, foliis tanaceti vulgaris decuplo minori-
bus. Boerh. Ind. *Shrubby African many-
flower'd Tansy, with Leaves like the common
Tansy, but ten times smaller.*

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Tetragonocarpos Africana fruticans, fo-
liis longis & angustis. Hort. Amst. *Shrubby
African Tetragonocarpos, with long narrow
Leaves.*

Teucrium Baticum. Clus. Hisp. *Spanish
Tree-germander.*

Teucrium Hispanicum, latiore folio. Inst.
R. H. *Spanish Tree-germander, with a broader
Leaf.*

Thlaspi montanum sempervirens. C. B. P.
Ever-green mountain Treacle Mustard.

Thlaspidium fruticosum, leucolii folio,
semper florens. Inst. R. H. *The Candy
Tuft-tree.*

Thlaspidium Hispanicum, ampliore flore,
folio crasso dentato. Hort. Elth. *Spanish
Candy Tuft-tree, with a larger Flower, and
a thick indented Leaf.*

Thymbra legitima. Clus. Hist. *The true
Thymbra of Clusius.*

Thymbra Sancti Juliani, sive satureia vera.
Lob. Icon. *The Thymbra of St. Julian, or the
true Savory of Lobel.*

*Tithymalus Creticus characias angustifo-
lius*, villosus & incanus. Tourn. Cor. *Candy
Wood-spurge, with narrow hoary and woolly
Leaves.*

Tithymalus arboreus. Alp. Exot. *Tree-
spurge.*

Tithymalus arboreus altissimus, folio sali-
cis, caulibus rubentibus. Boerh. Ind. *Tallest
Tree-spurge, with a Willow-leaf, and red
Stalks.*

Tithymalus arboreus, caule corallino, folio
hyperici, pericarpio barbato. Boerh. Ind. alt.
*The Spurge, with a Coralline-stalk, a St. Johns-
wort-leaf, and a bearded Cover to the Fruit.*

Yucca foliis aloes. C. B. P. *The common
Yucca, or Adams Needle, vulgo.*

Yucca arborescens, foliis rigidioribus rectis
ferratis. Hort. Elth. *Tree-yucca, with upright
stiff sawed Leaves.*

Yucca draconis folio serrato reflexo. Hort.
Elth. *Carolina Yucca, with a saw'd reflex'd
Leaf like the Dragon-tree.*

Ziziphus. Dod. *The Jujube-tree.*

The Plants which are enumerated in this
Catalogue, are such as will thrive much better
in an open airy Glass-case, than in a Green-
house amongst Orange-trees; because, as these
are very apt to shoot in the Winter Season
whenever the Weather is mild, so if they have
not a large Share of free Air admitted to them
at such Times, their Shoots will be very weak,
and apt to grow mouldy, whenever the Air is
excluded from them. And as these Plants only
require to be protected from Frost, so there
will be no occasion for any artificial Warmth,
and consequently no other Use for a Thermo-
meter in the House, than to shew the freezing
Point, that Shutters or Mats may be put over
the

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the Glasses, whenever there is Danger of the Frost entring to the Plants. As most of the Plants mentioned in this List, are such as require a pretty large Share of Moisture, so I have omitted such succulent Plants, as are apt to rot with too much Wet in Winter, tho' they are not in other respects more tender than the former; so should be placed in such an airy Glass-case in a Part by themselves, that they may not receive too much Water, nor imbibe the Moisture which may arise from the other Plants. I therefore I shall enumerate these succulent Plants in the List next following.

A Sclepias Africana aizoides. Inst. R. H. *Fritillaria crassa*, vulgò.
 Asclepias Africana aizoides, flore pulchrè fimbriato. Com. Præl. Greater *Fritillaria crassa*, with a hairy Flower.

Cacalanthemum folio nerii glauco. Hort. Elth. *The Cabbage-tree, or Carnation-tree*, vulgò.

Cacalanthemum Africanum, ficoidis folio. African *Cacalanthemum*, with a fig-marygold Leaf, commonly called the Balm of Gilead Tree.

Cotyledon Africana frutescens, foliis orbiculatis, limbo purpureo cinctis. Inst. R. H. *Shrubby African Navelwort*, with round Leaves edged with Purple.

Cotyledon Afra arborescens major, foliis glaucis oblongioribus, flore luteo. Boerh. Ind. alt. Greater African *Tree-navelwort*, with longer sea-green Leaves, and a yellow Flower.

Cotyledon major arborescens Afra, foliis orbiculatis glaucis, limbo purpureo, & maculis viridibus ornatis. Boerh. Ind. alt. Greater African *Tree-navelwort*, with roundish Leaves edged with Purple, and spotted with Green.

Cotyledon Africana frutescens, folio longo & angusto, flore flavescente. Com. Rar. Plant. *Shrubby African Navelwort*, with a long narrow Leaf, and a yellowish Flower.

Cotyledon Africana frutescens, flore umbellato coccineo. Com. Rar. Plant. *Shrubby African Navelwort*, with scarlet Flowers growing in an Umbel.

Cotyledon Capensis, folio semiglobato. Hort. Elth. *Navelwort of the Cape of Good Hope*, with a half round Leaf.

Crassula anacampserotis folio. Hort. Elth. *Crassula with an Orpine-leaf.*

Crassula portulacæ facie, arborescens. Hort.

Elth. *Tree-like Crassula, with a Purslane-leaf, commonly called the Purslane-tree.*

Crassula ceposa longifolia. Hort. Elth. *Onion-like Crassula, with a long Leaf.*

Crassula caulescens, foliis sempervivi cruciatis. Hort. Elth. *Stalky Crassula, with sengreen Leaves, commonly called a Ficoides.*

Crassula mesembryanthemi facie, foliis longioribus asperis. Hort. Elth. *Crassula with the Face of a Ficoides, having long rough Leaves.*

Crassula orbicularis repens, foliis sempervivi. Hort. Elth. *Round-creeping Crassula, with sengreen Leaves.*

Crassula portulacæ facie, repens. Hort. Elth. *Creeping Crassula, with the Appearance of Purslane.*

Ficoides. All the Sorts enumerated in the Dictionary.

Opuntia vulgò herbariorum. J. B. *The common Indian Fig.*

Phalangium Africanum, foliis cepaceis, floribus spicatis aureis. Boerh. Ind. alt. African *Kingspear, with Onion-leaves, and golden Flowers growing in Spikes.*

Phalangium Africanum, foliis aloes, floribus luteis spicatis. Hort. Elth. African *Kingspear, with Aloe-leaves, and yellow Flowers growing in Spikes.*

Phalangium Æthiopicum ramosum, floribus albis, petalis reflexis. Hort. Amst. *Branching Æthiopian Kingspear, with white Flowers, whose Petals are reflexed.*

Sedum majus arborescens. J. B. *The Tree-housleek.*

Sedum majus arborescens, foliis elegantissime variegatis tricoloribus. Boerh. Ind. alt. *The strip'd Housleek tree.*

Sedum Canarinum, foliis omnium maximis. Hort. Amst. *Canary Housleek, with the largest Leaves.*

Sedum Afrum montanum, foliis subrotundis, dentibus albis ferratis, confertim natis. Boerh. Ind. alt. African *Housleek, with roundish Leaves indented and sawed on their Edges.*

Sedum Afrum saxatile, foliolis fedi vulgaris, in rosam verè compositis. Boerh. Ind. alt. African *Rock-housleek, with small Leaves like the common Sort, collected like a Rose.*

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A CATALOGUE of such PLANTS as are proper to place in a warm Green-house amongst Orange-trees, which do not require any artificial Heat in Winter, but must not have so large a Share of Air admitted to them, as those Plants before-mentioned.

A Butilon Altheoides, flore carneo, fructu globofo. Hort. Elth. *Abutilon like the Althæa frutex, with a flesh-coloured Flower, and a globular Fruit.*

Aloe Americana minor. Munt. *Small American Aloe.*

Aloe Africana caulescens, foliis spinosis, maculis ab utraque parte albicantibus notatis. Hort. Amst. *African stalky Aloe, with prickly Leaves marked on every Part with white Spots, commonly called the Carolina Aloe.*

Aurantium acridum, vulgare. Fer. Hesp. *The Seville Orange.*

Aurantium medulla dulci vulgare. Fer. Hesp. *The sweet Seville Orange.*

Aurantium Sinense. Fer. Hesp. *The China Orange.*

Aurantium crispum folio. Fer. Hesp. *The curled-leav'd Orange.*

Aurantium crispum folio, elegantissime variegato. Boerh. Ind. alt. *The strip'd curled-leav'd Orange.*

Aurantium corniculatum. Fer. Hesp. *The horned Orange.*

Aurantium folio variegato, vulgare, Anglicum dictum. Boerh. Ind. alt. *The common strip'd-leav'd Orange.*

Aurantium hermaphroditum, partim aurantium, partim citreum. Hesp. Nor. *The Hermaphrodite Orange.*

Aurantium angusto folio dictum. Boerh. Ind. alt. *The willow-leav'd Orange, commonly called the Turkey Orange.*

Aurantium angusto folio, elegantissime variegato. *The strip'd Turkey Orange.*

Aurantium angusto & acuminato folio, fructu parvo odoratissimo, mela rosa dictum. Claric. cult. Plant. *Orange-tree with a narrow pointed Leaf, and a small sweet-scented Fruit, called Mela Rosa.*

Aurantium flore pleno. *The Orange-tree, with a double Flower.*

Aurantium foetiferum. Fer. Hesp. *The childing Orange.*

Aurantium fructu multiplici. Inst. R. H. *The cluster Orange.*

Aurantium Sinicum pumilum. Camell. Syll. *The dwarf China Orange, commonly called the Nutmeg Orange.*

Citreum vulgare. Inst. R. H. *The common Citron.*

Citreum dulci medullâ. Inst. R. H. *The sweet Citron.*

Citreum magno fructu. Inst. R. H. *The large Citron.*

Citreum Florentinum, fructu suavissimo. Till. *The Chedrat.*

Citreum Florentinum, folio sinuato & serrato, fructu oviformi. Hort. Maur. *Florentine Citron, with an indented and sawed Leaf, and an egg-shap'd Fruit.*

Citreum moschum redolens, fructu multiformi. Claric. cult. Pl. *Citron smelling like Musk, with a many-shap'd Fruit.*

Ligustrum Capense sempervirens, folio crasso subrotundo. Hort. Elth. *Ever-green Privet from the Cape, commonly called the Hottentot Cherry.*

Limon vulgaris. Fer. Hesp. *The common Lemon.*

Limon dulci medullâ, vulgaris. Fer. Hesp. *The sweet Lemon.*

Limon acris. Fer. Hesp. *The Lime or sour Lemon.*

Limon pyri effigie. Fer. Hesp. *The pear-shap'd Lemon.*

Limon citratus. Fer. Hesp. *The citron Lemon.*

Limon citratus, altero foetus. Inst. R. H. *The childing Lemon.*

Limon fructu racemoso. Inst. R. H. *The cluster Lemon.*

Limon flore pleno. Boerh. Ind. alt. *The double flowering Lemon.*

Limon vulgaris, foliis ex aureo variegatis. *The gold-strip'd Lemon.*

Limon incomparabilis. Fer. Hesp. *The incomparable Lemon.*

Limon imperialis. Fer. Hesp. *The imperial Lemon.*

Molle. Clus. in Monard. *The Arbor Molle, or Peruvian Mastick-tree.*

Myrtus latifolia Bætica i. vel foliis laurinis. C. B. P. *Broad-leav'd Spanish Myrtle, commonly called the bay-leav'd Myrtle.*

Myrtus

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Myrtus latifolia Bætica 2. vel foliis laurinis, confertim nascentibus. C. B. P. *The orange-leav'd Myrtle*, vulgò.

Myrtus balsamica, foliis mali granatæ. H. L. *Pomegranate-leav'd Myrtle*.

Myrtus foliis odore nucis moschatæ, cauliculis rubentibus, vulgò odore citri. Schuyt. Cat. *The Nutmeg Myrtle*.

Myrtus angustifolia Bætica. C. B. P. *The rosemary-leav'd Myrtle*.

Myrtus odore nucis moschatæ, cauliculis rubentibus, foliis ex luteo variegatis. *The strip'd Nutmeg Myrtle*.

Myrtus minor vulgaris. C. B. P. *The box-leav'd Myrtle*.

Myrtus minor vulgaris, foliis ex albo variegatis. *The strip'd box-leav'd Myrtle*.

Myrtus foliis minimis & mucronatis. C. B. P. *The thyme-leav'd Myrtle*.

Nerium Indicum angustifolium, floribus odoratis simplicibus. H. L. Bar. *Narrow-leav'd sweet-scented Indian Oleander*.

Nerium Indicum latifolium, floribus odoratis plenis. H. L. *Broad-leav'd Indian Oleander, with double sweet-scented Flowers*.

Nerium Indicum, flore variegato odorato pleno. Hort. Amst. *Indian Oleander, with a double strip'd sweet-scented Flower*.

Staphylodendron Americanum, foliis lauri angustis. Plum. *American Bladder-nut, with narrow Bay-leaves*.

Ziziphus argentea Zeylanica, spinis carens, Walæmbilla Zeylanenlibus dicta. C. B. P. *Silvery Fijube of Ceylon, without Thorns*.

A CATALOGUE of such PLANTS as should
be placed in a Stove, but require the least Degree of Heat in Winter.
These are what are mark'd on Mr. Fowler's Botanical Thermometers, as
the first Class of Stove-plants; so that the Spirits in the Tube should not be
permitted to sink much below the assigned Point, nor must they be raised
more than eight or ten Degrees above it, during the Winter Season.

A *Cacia vera*. J. B. *The true Egyptian Acacia*.

Acacia Indica Farnesiana. Ald. *The Indian Acacia, with resinous Pods*.

Acacia non spinosa, flore albo, foliorum pinnis latiusculis glabris, siliquis longis planis. Houst. *Smooth Acacia, with a white Flower, broad smooth Wings to the Leaves, and long flat Pods*.

Acacia cornigera, floribus globosis. Houst. *The horned Acacia, with round Flowers*.

Acacia cornigera, floribus oblongis. Houst. *The horned Acacia, with oblong Flowers*.

Alkekengi Bonariense repens, bacca turbinata viscosa. H. Elth. *Creeping Winter Cherry of Buenos Ayres, with a clammy top-shap'd Berry*.

Alkekengi Americanum frutescens, fructu globoso rubro, vesicâ atropurpureâ. Houst. *Shrubby American Winter Cherry, with a round red Fruit, having a purple Bladder over it*.

Aloe vulgaris. C. B. P. *The common Barbados Aloe*.

Aloe succotrina angustifolia spinosa, flore purpureo. Breyn. prod. *The succotrine, or purging Aloe*.

Aloe Africana caulescens, foliis spinosis, maculis ab utraque parte albicantibus obscurioribus, magis glaucis. Boerh. Ind. alt. *Stalky African Aloe, with prickly dark-green Leaves, spotted on every Side with white*.

Aloe Africana, foliis glaucis, margine & dorso parte superiore spinosis, flore rubro. Com. Præhud. *African Aloe, with sea-green Leaves beset with Prickles on the Edges, and at the Extremity of the under Part, and a red Flower*.

Aloe Africana arborescens montana, non spinosa, folio longissimo plicatili, flore rubro. Hort. Amst. *Smooth African Tree-aloe, with a long flat Leaf, and a red Flower*.

Aloe Africana caulescens, foliis glaucis caulem amplectantibus. Hort. Amst. *African stalky Aloe, with sea-green Leaves, embracing the Stalk*.

Aloe Africana caulescens, foliis minus glaucis, caulem amplectentibus, dorso parte supremâ spinosâ. Com. Præhud. *Stalky African Aloe, with Leaves embracing of the Stalk, which have Spines on the Back at their Extremity*.

Aloe

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Aloe Africana caulescens, foliis glaucis, caulem amplectentibus, latioribus & undequaque spinosis. Com. Præl. Stalky African Aloe, with broader sea-green Leaves embracing the Stalk, and prickly on every Side.

Aloe Africana caulescens, foliis glaucis brevioribus, caulem amplectentibus, foliorum parte internâ & externâ nonnihil spinosâ. Com. Præl. Stalky African Aloe, with shorter sea-green Leaves embracing the Stalk, and prickly on every Side.

Aloe Africana caulescens, foliis glaucis brevissimis, foliorum summitate internâ & externâ nonnihil spinosâ. Com. Præl. African stalky Aloe, with the shortest sea-green Leaves, which are prickly on every Side at their Ends.

Aloe Africana, flore rubro, folio maculis albicantibus ab utraque parte notato. H. A. The common Tongue-aloe, vulgò.

Aloe Africana caulescens, folio crasso obscure viridi, spinis ad latera & in dorso armato. Boerh. Ind. alt. African stalky Aloe, with a thick dark-green Leaf, armed with Prickles on the Backside.

Aloe Africana, flore rubro, folio triangulari, & verrucis albicantibus ab utraque parte notato. Hort. Amst. The triangular Aloe, vulgò.

Aloe Africana, foliis planis conjugatis carinatis verrucosis, caule & flore corallii colore. Boerh. Ind. alt. The narrow-leav'd Tongue-aloe, vulgò.

Aloe Africana, foliis planis latioribus conjugatis carinatis, flore rubro. The broad-leav'd Tongue-aloe, vulgò.

Aloe Africana, foliis longis conjugatis, supra cavis margaritifera, flore rubro elegantissimo. Boerh. Ind. alt. The pearl-tongue Aloe, vulgò.

Aloe Africana erecta; rotundo folio parvo, & in acumen acutissimum exeunte. Com. Præl. The upright Aloe, with a sharp pointed Leaf.

Aloe Africana erecta triangularis, & triangulari folio viscoso. Com. Præl. The upright triangular Aloe.

Aloe Africana minima atroviridis, spinis herbaceis numerosis ornata. Boerh. Ind. alt. The least herbaceous Aloe, vulgò.

Aloe Africana humilis, foliis ex albo & viridi variegatis. Com. Præl. The partridge-breast Aloe, vulgò.

Aloe Africana humilis, spinis inermibus & verrucis obsita. Com. Præl. The hedge-hog Aloe.

Aloe Africana margaritifera minor. Hort. Amst. The small Pearl-aloe.

Aloe Africana, folio in summitate triangulari, margaritifera, flore subviridi. Hort. Amst. The greater Pearl-aloe, vulgò.

Aloe Africana, brevissimo crassissimoque folio, flore subviridi. Hort. Amst. The Cushion-aloe, vulgò.

Aloe Africana humilis arachnoidea. Com. Rar. The Cobweb-aloe.

Apocynum Americanum erectum, foliis oblongis acuminatis, floribus ex albo virentibus. Houst. Upright American Dogbane,

with oblong pointed Leaves, and greenish white Flowers.

Apocynum Americanum, foliis amygdali longioribus. Plum. American Dogbane, with longer Almond-leaves.

Apocynum Americanum scandens hirsutissimum, foliis oblongis, filiquis maximis glabris. Climbing hairy American Dogbane, with oblong Leaves, and the largest smooth Pods.

Afteriscus frutescens, laureolæ folio. Houst. Cat. Shrubby Afteriscus, with a spurge-laurel Leaf.

Aurantium fructu maximo, Indiæ orientalis. Boerh. Ind. alt. The Shaddock, or Pamplemoes.

Camara spinosa, flore variegato. Plum. Nov. Gen. Prickly American Viburnum, with a variable Flower.

Camara melissæ folio, flore variabili. Hort. Elth. American Viburnum, with a Balm-leaf, and a variable Flower.

Camara trifolia, purpurascens flore. Plum. Nov. Gen. Three-leav'd American Viburnum, with a purplish Flower.

Camara salviæ foliis mucronatis, subtus villosis, flore minore luteo. Houst. American Viburnum, with pointed Sage-leaves, which are hairy underneath, and a small yellow Flower.

Camara non spinosa, salviæ folio, rotundo & rugoso, flore minore pallido. Houst. Smooth American Viburnum, with a round rough Leaf, and a smaller pale Flower.

Camara salviæ foliis, floribus incarnatis. American Viburnum, with Sage-leaves, and a fresh-colour'd Flower.

Camara non spinosa, urticæ folio bullato, flore aureo. Houst. Smooth American Viburnum, with a studded Nettle-leaf, and a golden Flower.

Camara non spinosa, urticæ folio minore, flore albo. Houst. Smooth American Viburnum, with a smaller Nettle-leaf, and a white Flower.

Camara non spinosa, salviæ folio rugoso, flore purpurascens. Houst. Smooth American Viburnum, with a rough Sage-leaf, and a purplish Flower.

Campanula Canariensis, atriplicis folio, radice tuberosâ. Inst. R. H. Canary Campanula.

Camphora officinarum. C. B. P. The Camphire-tree.

Cannacorus flore coccineo splendens. Inst. R. H. Indian Reed, with a splendid scarlet Flower.

Cannacorus flore luteo punctato. Inst. R. H. Indian Reed, with a spotted yellow Flower.

Cannacorus amplissimo folio, flore rutile. Inst. R. H. Indian Reed, with a very large Leaf, and a red Flower.

Cannacorus latifolius vulgaris, foliis ex albo variegatis. Indian Reed, with broad striped Leaves.

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Cannacorus longissimo folio, flore luteo majore. Indian Reed, with a very long Leaf, and a large yellow Flower.

Cereus erectus altissimus Syrinamenfis. Par. Bat. The largest Torch-thistle.

Corallodendron Carolinianum, floribus spicatis coccineis, radice crassissima. Carolina Coral-tree, with scarlet Flowers growing in a Spike, and a very thick Root.

Cotyledon Afra, folio crasso lato laciniato, flosculo aureo. Boerh. Ind. alt. African Navekwort, with a broad thick jagged Leaf, and a small golden Flower.

Crassula altissima perforata. Hort. Elth. The tallest thorough-leaf Crassula.

Digitalis Canariensis acanthoides frutescens, flore aureo. Hort. Amst. Shrubby Canary Fox-glove, with a golden Flower.

Euphorbium tetragonum & pentagonum spinosum Canarinum. Boerh. Ind. alt. The square-branching Euphorbium, vulgò.

Euphorbium Afrum, facie fructus pini. Boerh. Ind. The little Medusa's-head, vulgò.

Euphorbium Afrum, caule crasso squamoso, ramis in capitis Medusæ speciem cincto. Boerh. Ind. alt. The greater Medusa's-head, vulgò.

Euphorbium Afrum, caule squamoso tuberoso, minus. Boerh. Ind. alt. African Euphorbium, with a small scaly and tuberous Stalk.

Euphorbium quod anteuphorbium. Dod. The Anti-euphorbium, vulgò.

Ficus Bengalensis, folio subrotundo, fructu orbiculato. Hort. Amst. Roundish-leaf'd Fig-tree of Bengall, with a round Fruit.

Hæmanthus Africanus. H. L. The Blood-flower, or Cape-tulip.

Hæmanthus colchici foliis, perianthio herbaceo. Hort. Elth. Blood-flower, with meadow-saffron Leaves, and an herbaceous Empalement, commonly called Bastard-dragon.

Ketmia Sinensis, fructu subrotundo, flore simplici. Inst. R. H. The single China Rose, vulgò.

Ketmia Sinensis, fructu subrotundo, flore pleno. Inst. R. H. The double China Rose.

Liguströides, quod ligustrum Americanum aculeatum, fructu testiculato. Plum. Cat. Prickly American bastard Privet, with testiculated Fruit.

Malpighia mali punici facie. Nov. Gen. Barbados Cherry, vulgò.

Montia arborescens, abutili folio ferrato, fructu racemoso. Houst. Tree-like Montia,

with a saw'd yellow Mallow-leaf, and branching Seeds.

Opuntia major, validissimis spinis munita. Inst. R. H. The greater Indian Fig, armed with strong Spines.

Opuntia folio oblongo, media. Inst. R. H. The middle Indian Fig, with an oblong Leaf.

Opuntia maxima, folio spinoso latissimo & longissimo. Inst. R. H. The greatest Indian Fig, with the longest and broadest Leaves.

Opuntia latifolia, crassiori folio, spinis albis numerosis armato. Boerh. Ind. alt. Broad thick-leaf'd Indian Fig, armed with many white Spines.

Opuntia folio spinoso longissimo & angusto. H. L. Indian Fig, with a long narrow prickly Leaf.

Palma dactylifera major vulgaris. Johnst. Dend. Greater date-bearing Palm-tree.

Palma humilis, seu chamæripes. J. B. The dwarf Palm, or Palmetto.

Periploca Americana scandens, folio convulvi, fructu alato. Plum. Cat. Climbing bastard Dogsbane, with a Bindweed-leaf, and a winged Fruit.

Petiveria folani foliis, loculis spinosis. Plum. Nov. Gen. Guinea Hen Weed, vulgò.

Plumbago Americana, betæ folio ampliore. Plum. Cat. American Leadwort, with a larger Beet-leaf.

Sclarea Mexicana altissima, facie heliotropii. Hort. Elth. Tallest Mexican Clary, with the Face of Turnsole.

Solanoides Americana, circææ foliis glabris. Aët. Reg. S. American bastard Nightshade, with smooth inchanter's-nightshade Leaves.

Solanoides Americana, circææ foliis hirsutis. Aët. Reg. S. American bastard Nightshade, with hairy inchanter's-nightshade Leaves.

Solanum spinosum maxime tomentosum. Bocc. Rar. Pl. Prickly Nightshade, with the most woolly Leaves.

Solanum Americanum frutescens tomentosum, flore albo umbellato, fructu parvo rubro. Houst. Shrubby woolly American Nightshade, with white Flowers growing in an Umbel, and a small red Fruit.

Solanum Americanum frutescens & spinosum, quercus folio. Houst. Shrubby and thorny American Nightshade, with an Oak-leaf.

Solanum arborescens & spinosum, foliis tomentosis, flore magno cœruleo. Houst. Thorny Tree-nightshade, with woolly Leaves, and a large blue Flower.

Solanum lignosum Africanum sempervirens, laurinis foliis. Hort. Amst. African woody Nightshade, with ever-green Bay-leaves.

Solanum Bahamenfe arborescens, folio sinuato. Hort. Elth. Tree-like Nightshade, of the Bahama Islands, with an indented Leaf.

Tithy-

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Tithymalus arboreus Africanus. Inst. R. H. African Tree-spurge.

ligno citharæ & panduræ fiunt. Pluk. Phyt. The Fiddle-wood of Barbados.

Urtica racemifera maxima Sinarum, foliis subtus argenteis, lanugine villosis. Pluk. Amalth. The greatest branching China Nettle, whose Leaves are covered with a silvery Down on their Backside.

Citharexylum arbor laurifolia Americana, foliorum venis latè candicantibus, ex cujus

Several of the Plants which are enumerated in the above Catalogue, may be preserved in a good Green-house, without any artificial Heat; but then they will not flower so well, nor become so vigorous, as when they have this moderate Share of Warmth assigned them, on the Thermometer; and a small Expence of Fuel will be sufficient to keep a pretty large Stove to the Heat.

A CATALOGUE of such EXOTIC PLANTS as require to be kept in the Heat assigned for the second Class on Mr. Fowler's Thermometers.

A *Cacia arborea major spinosa,* pinnis quatuor majoribus subrotundis, filiquis variè intortis. Sloan. Cat. Greater prickly *Acacia,* with four broad roundish Wings to each Leaf, and the Pods variously twisted.

Acacia Americana, humilis & spinosa, pinnis foliorum acuminatis, floribus herbaceis, filiquis variè intortis. Dwarf prickly *Acacia,* with sharp-pointed Leaves, greenish Flowers, and Pods variously twisted.

Acacia spinosa humilis, filiquis teretibus & resinosis. Houst. Dwarf prickly *Acacia,* with taper resinous Pods.

Acacia non spinosa, floribus globosis albis, foliorum pinnis tenuissimis glabris, filiquis ad singula grana tumidis. Houst. Smooth *Acacia,* with round white Flowers, very narrow smooth Leaves, and Pods which swell in the Place where each Seed is lodged.

Acacia Americana spinosa, filiquis longis recurvis luteis. Houst. Prickly *Acacia,* with long yellow bending Pods.

Acacia non spinosa, flore albo, staminibus longis, foliorum pinnis latiusculis glabris & auritis. Houst. Smooth *Acacia,* with a white Flower, having long Chives and broad smooth eared Wings to the Leaves.

Acacia humilis non spinosa, foliis subtus incanis, florum staminibus longis rubentibus. Houst. Dwarf smooth *Acacia,* with Leaves hoary on their Underside, and long reddish Chives to the Flower.

Acacia Americana non spinosa, flore purpureo, staminibus longissimis, filiquis planis villosis, pinnis foliorum tenuissimis. Houst. Smooth American *Acacia,* with a purple Flower, having very long Chives, flat hairy Pods, and very narrow Leaves.

Acacia spinosa, foliorum pinnis tenuissimis glabris, floribus globosis luteis, spinis longis-

simis. Houst. Prickly *Acacia,* with narrow smooth Leaves, yellow round Flowers, and very long Thorns.

Acacia non spinosa tenuifolia villosa, floribus globosis albis, filiquis brevibus hirsutis. Houst. Smooth *Acacia,* with narrow hairy Leaves, round white Flowers, and short hairy Pods.

Acacia non spinosa, latiore folio villosa, floribus globosis albis, filiquis brevibus hirsutis. Houst. Smooth *Acacia,* with broad hairy Leaves, round white Flowers, and short hairy Pods.

Acacia Americana, flore luteo globoso, spinis exiguis, foliorumque pinnis tenuissimis pubescentibus. Houst. American *Acacia,* with a round yellow Flower, small Spines, and very narrow woolly Wings to the Leaves.

Acacia spinosa tenuifolia, floribus spicatis luteis, filiquis longissimis compressis flavis. Houst. Smooth narrow-leav'd *Acacia,* with yellow Flowers growing in Spikes, and very long flat yellowish Pods.

Acacia spinosa tenuifolia, spinis singulis cornu bovinum per longitudinem fissum referentibus. Houst. Prickly narrow-leav'd *Acacia,* with single Thorns resembling the Horn of an Ox, split thro' the Middle.

Acacia Americana, faginis foliis, tetraphylla, flosculis staminosis, in spicam dispositis. Pluk. Amalth. Broad four-leav'd *Acacia,* with stameneous Flowers disposed in a Spike.

Acacia humilis latifolia, non spinosa, staminibus florum longissimis rubentibus. Houst. Broad-leav'd *Acacia,* without Thorns and Flowers, having very long red Chives.

Acacia Americana non spinosa latifolia, filiquis marginatis & ad singula grana tumidis. Houst. Broad-leav'd American *Acacia* without Thorns,

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Thorns, and Pods which are bordered and swell where each Seed is lodged.

Acacia spinosa tenuifolia, filiquis latis, spinis minimis recurvis solitariis. Houst. Narrow-leav'd prickly Acacia, with broad Pods, and small crooked Thorns growing singly.

Acacia non spinosa tetraphylla latifolia, staminibus florum longissimis rubentibus. Broad four-leav'd Acacia without Thorns, and long red Chives to the Flower.

Acacia non spinosa tenuifolia, filiquis variè intortis. Narrow-leav'd Acacia without Thorns, and variously twisted Pods.

Acacia Americana tetraphylla & spinosa, floribus globosis, staminibus florum longis rubentibus. Houst. Four-leav'd Acacia without Thorns, and round Flowers, having long red Chives.

Aloe Americana sobolifera. H. L. The childing Aloe, vulgò.

Aloe Americana, ex Vera Cruce, foliis angustioribus, minus glaucis. Hort. Beaum. Narrow-leav'd Aloe of Vera Cruce.

Aloe Americana, folio viridi rigidissimo foetido, piet dicta indigenis. Hort. Beaum. American Aloe, with stiff green Leaves, commonly called Piet in America.

Aloe Americana, folio viridi rigidissimo, margine spinoso silk-grafs dicta. American Aloe, with a stiff green Leaf, having Spines on the Sides, commonly called Silk-grafs.

Aloe Guineensis, radice geniculatâ, foliis è viridi & atro undulatis variegatis. Hort. Amst. The Guinea Aloe, vulgò.

Aloe Zeylanica pumila, foliis variegatis. Par. Bat. prod. The dwarf Ceylon Aloe.

Apocynum fibrosâ radice, petalis coccineis, corniculis croceis. Hort. Amst. Dogbane with a fibrous Root and scarlet Flowers, having saffron-coloured Middles, commonly called Ipecacuana.

Apocynum Americanum scandens, foliis citri, filiquis maculatis. Plum. Climbing American Dogbane, with Citron-leaves, and spotted Pods.

Aristolochia Americana scandens, foliis cordatis, fructu tereti. Climbing American Birthwort, with heart-shap'd Leaves, and a taper Fruit.

Aristolochia Americana scandens, foliis laurinis angustis, fructu maximo. Climbing American Birthwort, with narrow Bay-leaves, and the largest Fruit.

Aristolochia Americana erecta, flore atropurpureo, foliis angustis, radice repente. Plum. Upright American Birthwort, with long narrow Leaves, a dark purple Flower, and creeping Root.

Arum maximum Ægyptiacum, quod vulgò colocasia. Sloan. Cat. Greatest Egyptian Arum, called Colocasia.

Arum minus, nymphææ foliis, esculentum. Sloan. Cat. Smaller Arum, with water-lily Leaves, and an eatable Root.

Arum maximum Ægyptiacum, quod vulgò colocasia, cauliculis nigricantibus, Zeylanica. H. L. Greatest Egyptian Arum, with dark purple Footstalks.

Arundo saccharifera. C. B. P. The sugar Cane.

Arundo Indica arborea, Bambu vel Bambu dicta. The Bambu Cane, vulgò.

Arundo arborea Indica, amplo pediculato folio, Bambu altera species. Raii Hist. The false Bambu Cane.

Banisteria scandens, foliis laurinis. Houst. Climbing Maple, vulgò.

Banisteria Americana scandens, folio subrotundo, flore ex aureo coccineo. Houst. Climbing Maple, with a roundish Leaf, and a golden scarlet Flower.

Banisteria Americana scandens, foliis citri, flore cœruleo spicato. Houst. Climbing Maple, with a Citron-leaf, and a blue Flower growing in Spikes.

Banisteria Americana scandens, foliis subrotundis, subtus pubescentibus. Houst. Climbing Maple, with roundish Leaves woolly underneath.

Banisteria Americana scandens, pseudocacia folio, flore purpurascens. Houst. Climbing American Maple, with a false Acacia-leaf, and a purplish Flower.

Barba Jovis Americana scandens, floribus cœruleis, ad alas foliorum conglobatis. Climbing American Jupit-r's-beard, with blue Flowers growing in Clusters from the Wing of the Leaf.

Barnardia folio subrotundo, mas. Houst. Round-leav'd male Barnardia.

Barnardia folio subrotundo, foemina. Houst. Round-leav'd female Barnardia.

Bassella. Hort. Mal. Climbing Nightshade of Malabar.

Bassella flore albo, foliis & caulibus viridibus. Climbing Malabar Nightshade, with a white Flower, and green Leaves and Stalks.

Bassella Sinica, foliis & caulibus viridibus, minus succulentis, fructu minore. Jessieu. China climbing Nightshade, with green Leaves and Stalks, which are less succulent, and a smaller Fruit.

Bauhinia non aculeata, folio ampliori & bicorni. Plum. Nov. Gen. Mountain Ebony, vulgò.

Bauhinia non aculeata, folio nervoso bicorni, floribus albicantibus. Houst. Smooth Bauhinia, with a nerve Leaf, and whitish Flowers.

Bauhinia non aculeata, folio subrotundo majore rigido & bicorni, flore purpurascens. Houst. Smooth Bauhinia, with a large stiff Leaf, and purplish Flower.

Bauhinia scandens & frutescens, folio subrotundo & bicorni, flore albo. Shrubby climbing Bauhinia, with a roundish Leaf, and a white Flower.

Bermudiana palmæ folio, radice bulbosâ. D. Lign. Bermudiana with a Palm-leaf, and a bulbous Root.

Bignonia scandens tetraphylla, fructu maximo echinato. Houst. Climbing Trumpet-flower, with four Leaves, and the largest prickly Fruit.

Bignonia Americana arborecens pentaphylla, flore roseo, major, filiquis planis. Plum. Cat. The white Wood, or Tulip-flower.

Bignonia scandens tetraphylla, flore racemoso carneo. Houst. Four-leav'd climbing Trumpet-flower, with a branching flesh-colour'd Flower.

Bignonia

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Bignonia Americana, scandens, foliis pinnatis hirsutis & marginibus sinuatis, siliquis longissimis & angustissimis. *Climbing American Trumpet Flower, with hairy winged Leaves, which are indented, and long, narrow Pods.*

Bignonia Americana, scandens, triphylla & pentaphylla, lobis amplioribus, mucronatis & serratis, siliquis longis compressis marginatis. *Climbing American Trumpet Flower, with three, and five Leaves, which are large pointed, and sawed, and long, flat, bordered Pods.*

Bontia Laureolæ facie. Hort. Elth. *The Barbados Wild Olive.*

Brunfelsia flore albo, fructu croceo molli. Plum. Nov. Gen. *Brunfelsia with a white Flower, and a soft, Saffron-coloured Fruit.*

Caapeba folio orbiculari & umbilicato lævi. Plum. Nov. Gen. *Caapeba, with a round, soft, umbilicated Leaf.*

Caapeba folio orbiculari & umbilicato tomentoso. Plum. Nov. Gen. *Caapeba, with a round, woolly, umbilicated Leaf.*

Caapeba folio orbiculari non umbilicato. Plum. Nov. Gen. *Caapeba, with a round Leaf, not umbilicated.*

Cæsalpina polyphylla, aculeis horrida. Plum. Nov. Gen. *Many-leav'd Cæsalpina, with strong Thorns.*

Cainito folio subtus aureo, fructu Maliformi. Plum. Nov. Gen. *The Star-Apple, vulgo.*

Cainito folio subtus aureo, fructu Olivæformi. Plum. Nov. Gen. *Cainito, with Olive-shap'd Fruit.*

Calaba folio Citrii splendente. Plum. Nov. Gen. *The Indian Mastick Tree.*

Cassia fistula, Alexandrina. C. B. P. *The purging Cassia, or Pudding-pipe Tree.*

Cassia fistula, Brasiliana. C. B. P. *The wild Cassia of America.*

Cassia Americana, tetraphylla, latifolia. Houst. *Four-leav'd American Cassia, with broad Leaves.*

Castorea repens, spinosa. Plum. Nov. Gen. *Creeping, prickly Castorea.*

Castorea racemosa, flore cœruleo, fructu croceo. Plum. Nov. Gen. *Branching Castorea, with a blue Flower, and Saffron-colour'd Fruit.*

Ceiba Viticis foliis, caudice aculeato. Plum. Nov. Gen. *Silk-cotton Tree, with a prickly Trunk.*

Ceiba Viticis foliis, caudice glabro. Plum. Nov. Gen. *Silk-Cotton Tree, with a smooth Trunk.*

Centaurium minus, maritimum, amplo flore cœruleo. Plum. Cat. *American lesser Centaury, with a large blue Flower.*

Chamærhododendron Indicum, flore amplo coccineo. Inst. R. H. *Indian Rosebay, with a large, scarlet Flower.*

Cereus erectus, altissimus, Syrinamensis, spinis albis. Boerh. Ind. alt. *The tallest Torch-Thistle of Surinam, with white Spines.*

Cereus erectus, quadrangulus, costis alarum instar assurgentibus. Boerh. Ind. alt. *The square Torch-Thistle.*

Cereus maximus, fructu spinoso, rubro. Dadus Par. Bat. *The greatest Torch-Thistle, with a prickly red Fruit.*

Cereus erectus, fructu rubro, non spinoso. Par. Bat. *Upright Torch-Thistle, with a smooth, red Fruit.*

Cereus erectus, gracilis, spinosissimus, spinis flavis, polygonus, lanugine alba pallescente. Boerh. Ind. alt. *The smaller Upright Torch-Thistle with many Angles, yellowish Spines, and pale white down on the Top.*

Cereus erectus, gracilior, spinosissimus, spinis albis polygonus. Boerh. Ind. alt. *Smaller upright Torch-Thistle with many Angles, beset with white Spines.*

Cereus cristatus, erectus, foliis triangularibus, profundè canaliculatis. Pluk. Phyt. *The triangular climbing Torch-Thistle.*

Cereus scandens, minor, trigonus, articulatus, fructu suavissimo. Par. Bat. *The triangular creeping Torch-Thistle, commonly called Prickly Pear.*

Cereus scandens, minor, polygonus, articulatis. Par. Bat. *The jointed small climbing Torch-Thistle, with many sides.*

Cereus minimus, articulatus, polygonus, spinosus. Boerh. Ind. alt. *The least prickly climbing Torch-Thistle, with many Angles.*

Cereus scolopendriæ folio brachiato. Hort. Elth. *The Torch-Thistle with a scolopendria Leaf, commonly called an Opuntia.*

Conyza fruticosa, Cisti odore, floribus pallide purpureis, summitatibus ramulorum infidentibus, capitulis & semine minoribus. Sloan. Cat. *Skrubby American Fleabane, smelling like the Rock Rose, with pale purple Flowers, growing on the Top of the Branches, and smaller Heads and Seeds.*

Conyza fruticosa, Cisti odore, floribus pallide purpureis, summitatibus ramulorum infidentibus, capitulis & semine majoribus. Sloan Cat. Jam. *Skrubby American Fleabane, smelling like the Rock Rose, with pale purple Flowers growing at the ends of the Shoots, and larger Heads and Seeds.*

Conyza arborescens, tomentosa, foliis oblongis, floribus in summitatibus ramulorum racemosis sparsis albicantibus. Houst. *Woolly Tree Fleabane, with oblong Leaves, and white Flowers, growing on thin Branches.*

Conyza frutescens, flore luteo, umbellato. Houst. *Skrubby American Fleabane with a yellow, umbellated Flower.*

Conyza arborescens, foliis oblongis, floribus singulis, tribus flosculis constantibus. Houst. *Tree American Fleabane, with oblong Leaves, and each Flower having three Florets.*

Conyza scandens, Lauri foliis aspersis, capitulis spicatis rotundis, floribus albis. Houst. *Climbing Fleabane, with rough Bay Leaves, round spiked Heads, and white Flowers.*

Conyza fruticosa, flore pallide purpureo, capitulis & lateribus ramulorum spicatis excurrentibus. Sloan. Cat. *Skrubby Fleabane, with a pale purple Flower growing in a Spike from the side of the Branches.*

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Copaiba

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Copaiba folio subrotundo, flore rubro.
The Balsam of Capevi.

Corallodendron triphyllum, Americanum, spinosum, flore ruberrimo. Inst. R. H. *Prickly three-leaved American Coral-Tree, with a very red Flower.*

Corallodendron triphyllum, Americanum, minus, spinis & seminibus nigricantibus. Inst. R. H. *Smaller three-leav'd American Coral-Tree, with blacker Seeds and Spines.*

Corallodendron triphyllum, Americanum, non spinosum. Inst. R. H. *Three-leav'd American Coral-Tree, without spines.*

Corallodendron Americanum, minus, foliis acutioribus. Houst. *Small American Coral-Tree, with pointed Leaves.*

Corallodendron triphyllum, Americanum, non spinosum, foliis acutioribus flore rubente. *Three leav'd American Coral-Tree without Thorns, having sharp-pointed Leaves, and a reddish Flower.*

Corallodendron triphyllum, Americanum, caudice & nervis foliorum spinis armantibus. *Three-leav'd American Coral-Tree, whose Stems and Ribs of the Leaves are armed with spines.*

Cornus racemosa, trifolia & quinquefolia, foliis foraminulatis. Plum. Cat. *Branching American Dogwood, with three, and five Leaves.*

Cornutia flore pyramidato cæruleo, foliis incanis. Plum. Nov. Gen. *Cornutia with hoary Leaves, and a blue pyramidal Flower.*

Coronilla scandens pentaphylla. Plum. Manus. *Five-leav'd climbing American joint-podded Colutea.*

Cytisus Americanus, spinosus, floribus luteis ad alas nascentibus. Plum. Cat. *Prickly American Base Tree trefoil, with yellow Flowers growing from the Wings of the Leaves.*

Cytisus Americanus, frutescens, sericeus. Plum. Bat. *Shrubby American Base Tree trefoil, with silky Leaves.*

Cytisus Americanus, arborescens, fructu eduli albo. Plum. Cat. *The Pigeon-Pea, vulgo.*

Dalechampia scandens, Lupuli foliis, fructu hispido tricoco. Plum. Nov. Gen. *Climbing Dalechampia with Hop Leaves, and a prickly three seeded Fruit.*

Dioscorea scandens, foliis Tamni, fructu racemoso. Plum. Nov. Gen. *Climbing Dioscorea, with black Briony Leaves, and branching Fruit.*

Dioscorea scandens, folio hastato, fructu racemoso. Houst. *Climbing Dioscorea with a spear-shap'd Leaf, and branching Fruit.*

Dioscorea scandens, folio subrotundo acuminato, fructu racemoso. Houst. *Climbing Dioscorea with a roundish pointed Leaf, and branching Fruit.*

Dorstenia dentariæ radice, Sphondilii folio, placenta ovali. Houst. *Contrayerva with a Toothwort Root, a Cow-Parsnip Leaf, and an Oval Placenta*

Dorstenia dentariæ radice, folio minus laciniato, placenta quadrangulati & undulato. Houst. *Contrayerva with a Toothwort Root,*

a less jagged Leaf, and a square waved Placenta.

Douglaffia frutescens & spinosa, ligustri folio, flore albo. Houst. *Shrubby and prickly Douglassia with a Privet-leaf, and a white Flower.*

Dracunculus Indicus, trifido folio. Inst. R. H. *Indian Dragon, with a trisid-leaf.*

Dracunculus Indicus, folio quinquefido. Inst. R. H. *Indian Dragon-wort with a quinquefid-leaf.*

Dracunculus Americanus, Colocasie foliis laciniatis. Inst. R. H. *American Dragon with a jagged Colocasia-leaf.*

Dracunculus Americanus, scandens, triphyllus & auritus. Inst. R. H. *Climbing American Dragon with three-eared Leaves.*

Eupatorium Americanum, scandens, foliis subrotundis, lucidis, floribus spicatis albis. Houst. *Climbing American Hemp-Agrimony, with roundish shining Leaves, and white, spiked Flowers.*

Eupatorium Americanum, arborescens, Mori folio, floribus albicantibus. Houst. *Tree American Hemp-Agrimony, with a Mulberry-leaf, and white Flowers.*

Eupatorium Americanum, frutescens, Balsaminæ luteæ foliis, nigris maculis notatis. Houst. *Shrubby American Hemp-Agrimony, with a yellow Balsamine-leaf, spotted with black.*

Eupatorium Peruvianum, folio subrotundo trinervi utrinque acuto flore cæruleo. Vaill. Mem. *Peruvian Hemp-Agrimony with a roundish-pointed-leaf, and a blue Flower.*

Euphorbium Cerei effigie. Hort. Amst. *Euphorbium with the Appearance of the Torch-Thistle.*

Euphorbium Cerei effigie, caulibus gracilioribus. Boerh. Ind. alt. *Euphorbium having the Appearance of the Torch-thistle, and a slender stalk.*

Euphorbium verum Antiquorum, Scadida Calli. Hort. Mal. Hort. Amst. *The true Euphorbium of the Antients.*

Euphorbium trigonum & tetragonum, spinosum, ramis compressis. Disnard. *Euphorbium with three or four angles and flat branches.*

Euphorbium angulosum, foliis Nerii latioribus. Boerh. Ind. alt. *Angular Euphorbium with broad Oleander-leaves.*

Ficus Malabarensis, folio cuspidato, fructu rotundo, parvo, gemino. Pluk. Phyt. *Malabar Fig, with a long-pointed-leaf, and small, round fruit, growing double.*

Fuchsia triphylla, flore coccineo. Plum. Nov. Gen. *Three-leav'd Fuchsia with a scarlet Flower.*

Granadilla folio tricuspidi, flore parvo flavescente. Inst. R. H. *Passion-flower with a three-corner'd-leaf, and a small, yellowish Flower.*

Granadilla

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Granadilla fructu Citriforini, foliis oblongis. Inst. R. H. *The Water-Limon*, vulgo.

Granadilla latifolia, fructu Maliformi. Inst. R. H. *The broad-leav'd Passion-flower with an Apple-shap'd Fruit*, commonly called *Granadilla*.

Granadilla quæ Coanepilli, seu Contrayerva Hernan Houft. *Passion-flower called Contrayerva by Hernandez*.

Granadilla folio hastato, holoserico, petalis Candicantibus, fimbriis ex purpureo & luteo variis. Martyn. Cent. I. *Passion-flower with a silky spear-shap'd Leaf, and white Leaves to the Flowers, with purple and yellow Fringes*.

Granadilla folio oblongo ferrato, flore purpureo. Houft. *Passion-flower with an oblong sawed Leaf, and a purple Flower*.

Granadilla folio glabro, tricuspidi & angusto, flore virescente minimo. Inst. R. H. *Passion-flower with a smooth, narrow, three-corner'd Leaf, and the least greenish flower*.

Granadilla folio tricuspidi, flore ex purpurâ nigricante. Inst. R. H. *Passion-flower with a three-pointed Leaf, and a black, purple Flower*.

Granadilla folio tricuspidi, flore magno flavescente. Inst. R. H. *Passion-flower with a three-pointed Leaf, and a large yellowish Flower*.

Granadilla flore suaverubente, folio bicorni. Inst. R. H. *Passion-flower with a horned Leaf, and a soft, red Flower*.

Granadilla Androsæmi folio, fructu jujubino. Inst. R. H. *Passion-flower with a Tuscan Leaf, and a Fruit like the Jujube*.

Guajava alba, dulcis. H. L. *The sweet white Guava*.

Guajava rubra, acida, fructu rotundiori. H. L. *The round, red Guava*.

Guidonia Aurantii foliis, aculeata. Plum. Nov. Gen. *Prickly Guidonia with Orange-Leaves*.

Guidonia Nucis juglandis foliis, major. Plum. Nov. Gen. *Greater Guidonia with Walnut-tree Leaves*.

Guidonia Nucis juglandis foliis, minor. Plum. Nov. Gen. *Small Guidonia with Walnut-tree Leaves*.

Hedysarum arborescens, foliis Mimosæ, Plum. Cat. *Tree French Honey-suckle, with sensitive Plant Leaves*.

Hedysarum triphyllum, frutescens, foliis subrotundis sericeis, flore purpureo. Houft. *Three-leav'd Shrubby French Honey-suckle with round silky Leaves, and a purple Flower*.

Helianthemum frutescens, portulacæ folio. Plum. Cat. *Shrubby Dwarf Cistus with a Purslane Leaf*.

Helleborine purpurea, tuberosâ radice. Plum. Nov. Gen. *Purple Bastard Hellebore, with a tuberous Root*.

Helleborine foliis Liliacis, Asphodeli radice. Plum. Cat. *Bastard Hellebore, with Leaves like the Lilly, and an Asphodel Root*.

Hernandia amplo hederæ folio, umbilicato. Plum. Nov. Gen. *Jack in a Box*, vulgo.

Jasminoides Laureolæ folio, flore candido, interdiu odorato. Hort. Elth. *Bastard Jasmine, with a Spurge Laurel Leaf, and a white Flower, smelling sweet in the Day*.

Jasminoides folio Pishaminis, flore virescente, noctu odoratissimo. Hort. Elth. *Bastard Jasmine, with a greenish Flower, smelling sweet in the Night, called by the Spaniards Dama di Noche*.

Jasminum, five Sambach Arabum, Alpini. J. B. *The single Arabian Jasmine*, vulgo.

Jasminum, five Sambach Arabum, flore duplici. *The common Arabian Jasmine, with a half double Flower*.

Jasminum arborescens, foliis laurinis, flore umbellato. Houft. *Tree Jasmine, with Bay-Leaves, and an umbellated Flower*.

Jasminum Americanum, foliis conjugatis, floribus spicatis albis. Houft. *American Jasmine, with Leaves growing opposite, and white spiked Flowers*.

Jasminum Malabaricum, foliis Mali Aurantii, flore niveo odoratissimo. Com. *Malabar Jasmine, with Orange Leaves, and a very sweet, snowy Flower*.

Isora Althææ foliis, fructu breviori & crassiori. Plum. Nov. Gen. *The Screw Tree, with short, thick Fruit*.

Isora Althææ foliis, fructu longiori & angustiori. Plum. Nov. Gen. *The Screw-Tree, with longer and slenderer Fruit*.

Isora Althææ folio amplissimo, fructu crassissimo & villosio. Houft. *The Screw-Tree, with a very large Marsh-Mallow Leaf, and a very thick, hairy Fruit*.

Justicia frutescens, floribus spicatis majoribus, uno versu dispositis. Houft. *Skrubby Justicia, with larger spiked Flowers, placed on one Side of the Stalk*.

Laurus Americana, mas, foliis subrotundis, floribus in capitulum collectis. Houft. *Male American Bay-Tree, with roundish Leaves and Flowers collected in a Head*.

Laurus Americana, foemina, foliis subrotundis fructu albo umbellato. Houft. *Female American Bay-Tree, with roundish Leaves, and a white Flower growing in an Umbel*.

Leucanthemum Americanum, frutescens, foliis latis conjugatis, & asperis, flore albo, capitulis squamolis. Houft. *Skrubby American Ox-Eye, with broad, rough Leaves growing opposite, and a white Flower having a scaly Head*.

Lilio-Asphodelus Americanus, sempervirens, maximus, polyanthos albus, Houft. *Greatest Ever-green American Lilly Asphodel, with many white Flowers*.

Lilio-Asphodelus Americanus, flore umbellato albo, costâ purpureâ notato. Plum. Cat. *American Asphodel Lilly, with a white umbellated Flower, and the Stalk marked with Purple*.

Lilio-Asphodelus Americanus, foliis Scillæ, flore umbellato maximo purpureo. Plum. Cat. *American Asphodel Lilly, with Squil Leaves*.

A D D E N D A

Leaves, and a large purple Flower growing in an umbel.

Lilio-Asphodelus Americanus, bifolius, flore singulari purpureo. Plum. Cat. Two-leav'd American Asphodel Lilly, with a single purple Flower.

Lilio-Narcissus Indicus, saturato colore purpurascens. Mor. Hist. Indian Lilly-Daffodil, with a deep purple Flower.

Lilio-Narcissus Jacobæus, latifolius, Indicus, rubro flore. Mor. Hist. Broad-leav'd Indian Lilly-Daffodil, commonly called Narcissus Jacobæus.

Lilio-Narcissus Indicus, maximus, Sphæricus, floribus plurimis rubris Liliaceis. Mor. Hist. The greatest Spherical Indian Lilly Daffodil, with many red Lilly-shaped Flowers.

Lilio-Narcissus Indicus, pumilus, polyanthos. Mor. Hist. Dwarf Indian Lilly-Daffodil, with many Flowers.

Lilio Narcissus Indicus, pumilus, monanthos albus. Mor. Hist. Dwarf Indian Lilly-Daffodil, with a single white Flower.

Lilio-Narcissus Zeylanicus, latifolius, flore niveo externâ lineâ purpureâ striato. Herm. Broad-leav'd Lilly-Daffodil of Ceylon, with a white Flower, strip'd with Purple on the outside.

Lippia arborescens, foliis conjugatis, oblongis, capitulis squamosis & rotundis. Houst. Tree-like Lippia, with oblong Leaves growing opposite, and round scaly Heads.

Lobelia frutescens, portulacæ folio. Plum. Nov. Gen. Shrubby Lobelia, with a Purslane Leaf.

Malpighia angustifolia, folio subtus spinoso. Plum. Nov. Gen. The Cow-itch Cherry, vulgo.

Malpighia folio rotundo, fructu majore. The large Barbados Cherry.

Malpighia humilis Illicis Cocci-glandiferæ foliis. Plum. Nov. Gen. Dwarf Barbados Cherry, with Holm-Oak Leaves.

Manihot Theveti, Juca & Cassavi. J. B. Inst. R. H. The Cassava.

Manihot Americana, spinosissima, folio vitigineo. Plum. Cat. The most prickly Cassava, with a Chaste-Tree Leaf.

Manihot arborescens, minus spinosa, floribus albis umbellatis, foliis aconiti urentibus. Houst. Tree-like Cassavi, with less Spines, white Flowers growing in an umbel, and stinging Wolfs-bane Leaves.

Manihot frutescens, non spinosa, foliis glabris & minus laciniatis. Houst. Smooth shrubby Cassavi, with smooth Leaves, less jagged.

Maranta Arundinacea, Cannacori folio. Plum. Nov. Gen. Reed-like Indian Arrow-Root, with a Leaf of the Indian Cane.

Maranta Cannacori folio, flore albo minimo. Houst. Indian Arrow-root, vulgo.

Melocatus Americanus, minor. Boerh. Ind. alt. The small Melon-Thistle.

Methonica Malabarorum. H. L. The Superb Lilly.

Montia arborescens, Abutili folio serrato, fructu racemoso. Houst. Tree-like Montia, with a sawed yellow Mallow-leaf, and branching seed.

Muntingia folio sericeo, molli, fructu majore. Plum. Nov. Gen. Muntingia, with a soft, silky Leaf, and a larger Fruit.

Muntingia folio Ulmi aspero, fructu minimo glomerato. Plum. Nov. Gen. Muntingia, with a Dogwood-leaf, and a small Fruit.

Murucua folio lunato. Inst. R. H. Murucua, with a horned Leaf.

Musa fructu Cucumerino breviori. Plum. Nov. Gen. The Banana.

Musa fructu Cucumerino longiori. Plum. Nov. Gen. The Plantane Tree.

Myrtus arborea, aromatica, foliis Laurinis. Sloan. Cat. The All-spice Pimento, or Jamaica Pepper.

Opuntia Curassavica, minima. Hort. Beaum. The least Indian Fig.

Opuntia maxima, folio oblongo rotundo, majore, spinulis obtusis mollibus & innoentibus oblito, flore striis rubris variegato. Sloan. Cat. Jam. The greatest smooth Indian Fig, with red striped Flowers.

Opuntia major spinosa, caulescens, flore minore rubro clauso, fructu parvo coccineo. Houst. The great prickly Indian Fig, with a small, close, red Flower, and small, scarlet Fruit.

Opuntia caulescens, foliis amplissimis tenuibus compressis, spinis longissimis confertissimis, gracilibus & albicantibus armatis. Houst. Stalky Indian Fig, with large, narrow, compress'd Branches, which are closely armed with white Spines, commonly called Robinson Crusoe's Fig.

Orobis Americanus, latifolius, argenteus, flore purpureo. Houst. Broad silver-leav'd American Bitter-Vetch, with a purple Flower.

Orobis Americanus, erectus, foliorum pinnis angustis & subtus incanis, siliquis glabris. Houst. Upright American Bitter-Vetch, with narrow Leaves, hoary on the under side, and smooth Pods.

Orobis Americanus, procumbens & hirsutus, flore purpureo. Houst. Trailing, hairy, American Bitter-Vetch, with a purple Flower.

Palma Brasiliensis, Prunifera, folio plicatili, seu flabelliformi, caudice squamato. Raii Hist. The Palmetto Tree.

Palma foliorum pediculis spinosis, fructu pruniformi luteo oleoso. Sloan. Cat. The Oil-Palm, or, Negro-Oil, vulgo.

Palma Prunifera, foliis Yuccæ, fructu in racemis congestis Cerasi formi duro cinereo, Pisi magnitudine, cujus lachryma sanguis Draconis est dicta. Com. Hort. Amst. The Dragon-Tree.

Palma Japonica, spinosis pediculis, Polypodii folio. Par. Bat. Palm-Tree of Japan, with prickly Foot-stalks, and a Polypody Leaf.

Palma

A D D E N D A.

Palma Dactylifera, latifolia. Plum. Nov. Gen. *The broad-leav'd Date-bearing Palm-Tree.*

Palma Dactylifera, aculeata, minima. Plum. Nov. Gen. *The least, prickly, Date-bearing Palm.*

Palma Coccifera costarum lateribus aculeatis. Plum. Nov. Gen. *Nut-bearing Palm-Tree, with prickly Stalks.*

Palma Prunifera, Japonensis. H. L. *Plumb-bearing Palm-Tree of Japan.*

Palma montana, Malabarica, folio magno complicato, acuto, flore albo racemoso, fructu rotundo. Plum. Nov. Gen. *Mountain-Palm-Tree of Malabar, with a large folded Leaf, and white, round Fruit, growing in Clusters.*

Palma altissima, non spinosa, fructu Pruniformi minore, racemoso sparso. Sloan. Cat. *The Cabbage-Tree, vulgo.*

Palma tota spinosa, major, fructu Pruniformi. Sloan. Cat. *The great Macaw-Tree, vulgo.*

Palma altissima, non spinosa, fructu oblongo. Houst. *The Mountain-Cabbage-Tree, vulgo.*

Palma Dactifera & Vinifera. Plum. Nov. Gen. *The Date, and Wine-bearing Palm-Tree.*

Palma Malabarica, flosculis stellatis, fructu longo squamato. Plum. Nov. Gen. *Palm-Tree of Malabar, with small starry Flowers, and a long, scaly Fruit.*

Palma Dactylifera, fructu acerrimo. Plum. Nov. Gen. *The Date-bearing Palm-Tree, with very sharp Fruit.*

Palma minor. C. B. P. *The small Palm-Tree.*

Palma Indica, Coccifera, angulosa. C. B. P. *The Cocoa Nut-Tree.*

Palma Americana, acaulos, fructu clavato polypyreno. Houst. *American Palm, without a Stalk, and many Fruit, growing in Form of a Club.*

Pancratium Americanum, floribus albis, odore Balsami Gileadensi. *American Sea-Daffodil, with white Flowers smelling like Balsam of Gilead.*

Pancratium Americanum, foliis latissimis, floribus niveis majoribus odore Balsami Peruviani. *American Sea-Daffodil, with very broad Leaves, and larger white Flowers, smelling like Balsam of Peru.*

Pancratium Zeylanicum, flore albo odorato. *Sea-Daffodil of Ceylon, with a sweet, white Flower.*

Papaya fructu Melopeponis effigie. Plum. Cat. *The Papaw Tree, with a Mekin-shaped Fruit.*

Papaya mas. Boerh. Ind. alt. *The Male Papaw-Tree.*

Papaya fructu maximo. Peponis effigie. Plum. Cat. *The Papaw-Tree, with the largest Fruit, shap'd like a Pumpkin.*

Pereskia aculeata flore albo, fructu flavescente. Plum. Nov. Gen. *The Barbados Gooseberry, vulgo.*

Periploca Americana, latifolia, siliqua durâ oblonga tumida & glabra. Inst. R. H.

Broad-leav'd American Bastard Dogs-bane, with a hard, smooth, oblong Pod.

Periploca Americana, fructu molliter echinato. Inst. R. H. *American Bastard Dogs-bane, with a softer prickly Fruit.*

Periploca Americana, scandens, folio Convolvuli, fructu alato. Plum. *Climbing American Dogs-bane, with a Bindweed-leaf, and a winged Fruit.*

Petiveria Solani foliis, loculis spinosis. Plum. Nov. Gen. *Guinea Hen-Weed, vulgo.*

Plumbago Americana, Betæ folio ampliori. Plum. Cat. *American Lead-Wort, with a larger Beet Leaf.*

Randia frutescens, spinis bijugis, foliis subrotundis, floribus albis. Houst. *Skrubby Randia, with round Leaves, and white Flowers.*

Ricinoides Americana, Gossypii folio. Inst. R. H. *The Physick Nut.*

Ricinoides arbor, Americana, folio multifido. Inst. R. H. *The French Physick-Nut, vulgo.*

Ricinoides Americana staphisagriae folio. Inst. R. H. *The Wild Cassavi.*

Ricinoides frutescens, Althææ folio. Plum. Cat. *Skrubby Physick-Nut, with a Marsh-mallow Leaf.*

Ricinoides frutescens, Linariæ foliis obtusis. Plum. Cat. *Skrubby Physick-Nut, with blunt Toad-flax Leaves.*

Ricinoides frutescens, Lauri folio, calyce amplissimo viridi. Houst. *Skrubby Physick-Nut, with a Bay-leaf, and a large green Empalement.*

Rondeletia arborescens Tini facie. Plum. Nov. Gen. *Tree-like Rondeletia, with the Appearance of Laurus Tinus.*

Ruellia Americana, humilis, parvo flore cæruleo, capsulis teretibus. Houst. *Dwarf-American Ruellia, with a small blue Flower, and taper Pod.*

Ruellia Americana, humilis. Asphodeli radice. Plum. Nov. Gen. *Dwarf-American Ruellia, with an Asphodel Root.*

Saururus alius humilis, folio carnofo, subrotundo. Plum. Nov. Gen. *Low Lizard's-Tail, with a roundish fleshy Leaf.*

Saururus racemosus, seu botryites major. Plum. Nov. Gen. *Great branching Lizard's-tail.*

Saururus racemosus, seu botryites minor. Plum. Nov. Gen. *Lesser branching Lizard's-tail.*

Saururus cauda adunca. Plum. Nov. Gen. *Crooked Lizard's-tail.*

Saururus foliis Plantagineis, caudi breviori. Plum. Nov. Gen. *Lizard's-tail, with Plantane-leaves, and a shorter Tail.*

Saururus foliis amplis rotundis & umbilicatis. Plum. Nov. Gen. *Lizard's-tail, with large, round umbilicated Leaves.*

Saururus foliis amplis cordatis, non umbilicatis. Plum. Nov. Gen. *Lizard's-tail, with large, heart-shap'd-leaves.*

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Saururus frutescens, Lauto-Cerasi folio, fructu breviori & crassiore. Houst. *Skrubby Lizards-tail, with a Laurel-leaf, and a short, thick Fruit.*

Saururus arborescens, latifolia, villosa, fructu gracili. Houst. *Broad-leav'd, hairy-tree Lizard's-tail, with a slender Fruit.*

Saururus repens, folio orbiculari, nummulariæ facie. Plum. Nov. Gen. *Creeping Lizard's-tail, with a round Leaf, having the Appearance of Money-wort.*

Senna spuria arborea, villosa, foliis latis mucronatis, filiquis articulatis. Houst. *Hairy tree Bastard Sena, with broad-pointed Leaves, and jointed Pods.*

Senna spuria Americana, arborea, filiquis compressis angustis, longissimis pendulis. Houst. *Tree-American Bastard Sena, with long, narrow, flat hanging Pods.*

Senna spuria Americana, frutescens, Mimosa foliis, flore parvo, filiquis hirsutis brevissimis, pediculis insidentibus. Houst. *Skrubby American Bastard Sena, with Leaves like the sensitive Plant, a small Flower, and short, hairy Pods.*

Senna spuria Americana, frutescens, & procumbens, flore maximo, filiquis glabris. Houst. *Skrubby, and trailing American Bastard Sena, with a large Flower, and smooth Pods.*

Senna spuria frutescens, foliorum pinnis latioribus, caulibus pilosis, filiquis longissimis pediculis insidentibus. Houst. *Skrubby Bastard-Sena, with broader Leaves, hairy stalks, and long Pods.*

Serjania scandens, polyphylla & racemosa. Plum. Nov. Gen. *Climbing, and branching Serjania, with many Leaves.*

Serjania scandens enneaphylla & racemosa. Plum. Nov. Gen. *Climbing, and branching Serjania, with nine Leaves.*

Serjania scandens triphylla & racemosa. Plum. Nov. Gen. *Climbing, Three-leav'd, branching Serjania.*

Sherardia frutescens, nodiflora. Houst. *Skrubby, naked-flower'd Sherardia.*

Sisyrinchium Africanum, flore albo, radice venenata. African *Sisyrinchium, with a white Flower, and a poisonous Root.*

Spartium Americanum, Portulacæ foliis aculeatum. Ebeni Materie. Plum. *American Bastard Ebony.*

Spartium Americanum, scandens, Citrii foliis, floribus albis, confertim nascentibus. Plum. Cat. *Climbing American Broom, with Citron Leaves, and white Flowers growing in Clusters.*

Suriana foliis Portulacæ angustis. Plum. Nov. Gen. *Suriana, with narrow, Purslane-leaves.*

Tithymalus Indicus, frutescens. Raii Hist. *Skrubby, Indian Spurge.*

Tithymalus Indicus, vimineus, penitus aphyllus. Boerh. Ind. alt. *Twisting Indian Spurge, without Leaves.*

Tithymalus Curassavicus, Salicis & Atriplicis foliis glabris, caulibus viridantibus. Par. Bat. Prod. *Spurge from Curasso, with lower Leaves, like Sallow, and upper Leaves, like Orach, and a green Stalk.*

Tragia alia scandens, Urticæ folio. Plum. Nov. Gen. *Climbing Tragia, with a Nettle-leaf.*

Tragia scandens, longo Betonicæ folio. Plum. Nov. Gen. *Climbing Tragia, with a long Betony-leaf.*

Triumfetta fructu echinato, racemoso. Plum. Nov. Gen. *Triumfetta, with a rough, branching Fruit.*

Triumfetta fructu echinato, racemoso, minor. Millar. *Triumfetta, with a smaller, rough, branching Fruit.*

Turnera frutescens, Ulmi-folia. Plum. Nov. Gen. *Skrubby Turnera, with an Elm-leaf.*

Turnera frutescens, folio longiore & mucronato. *Skrubby Turnera, with a longer, pointed Leaf.*

Viburnum Americanum, latifolium, floribus albis, ramulis tomentosis. *Broad-leav'd American Way-faring-tree, with white Flowers and woolly Branches.*

Arbor baccifera, Laurifolia, aromatica, fructu viridi calyculato, racemoso. Sloan. *The Winters-Bark, or, Wild Cinamon.*

Arbor Laurifolia, venenata, folio leviter serrato, oblongo, obtuso, copiosum lac præbens. Sloan. Cat. *The Poison-tree, vulgo.*

Cedrus Barbadiensium, alatis Fraxini foliis, &c. Pluk. Phyt. *The Barbados Cedar, vulgo.*

Baobab Alp. Egypt. *The Ethiopian Sour Gourd.*

Frutex Lauri folio, pendulo, fructu tricoceo, semine nigro splendente. Catesb. Hist. Nat. *The Red-wood.*

Katsjula Kalengu. Hort. Mal.

A D D E N D A.

A CATALOGUE of the MOST TENDER EXOTICK PLANTS, which require to be kept in the Degree of Heat in Winter, marked on Mr. Fowler's Botanical Thermometer, for the Third Class of PLANTS.

A Cajou. Thevet. Franc. Antarct. *The Cashew-Tree.*

Ahouai Nerii folio flore luteo. Plum. Nov. Gen. *Ahouai, with an Oleander-leaf, and a Yellow Flower.*

Ananas. Plum. *The Ananas or Pine-Apple, all the kinds.*

Barleria Solani folio, flore coccineo. Plum. Nov. Gen. *Barleria, with a Night-shade-leaf and a scarlet Flower.*

Barleria aculeata, folani folio angustiore, flore cœruleo. Plum. Nov. Gen. *Prickly Barleria, with a narrow Night-shade-leaf and a blue Flower.*

Bauhinia aculeata, folio rotundo emarginato. Plum. Nov. Gen. *The Indian Savin-tree, vulgo.*

Bauhinia aculeata, folio rotundo emarginato, flore magno albo. Houst. *Prickly Bauhinia, with a round indented Leaf and a large white Flower.*

Bauhinia, flore luteo, spicato, folio subrotundo bicorni. Houst. *Bauhinia, with a Yellow spiked Flower and a round divided Leaf.*

Bellonia frutescens, folio Melissæ, aspero. Plum. Nov. Gen. *Shrubby Bellonia, with a rough Baum Leaf.*

Bignonia Americana, arbor, flore luteo, folio Fraxini. Plum. Cat. *American Tree Bignonia, with a Yellow Flower and an Ash-tree-leaf.*

Bihai amplissimis foliis, florum vasculis coccineis. Plum. Nov. Gen. *Bihai, with very large Leaves and a scarlet covering to the Flower.*

Bihai amplissimis foliis, florum vasculis subnigris. Plum. Nov. Gen. *Bihai, with very large Leaves and a Black covering to the Flower.*

Bocconia racemosa, sphondilii folio tomentoso. Plum. Nov. Gen. *Branching Bocconia, with a woolly Cow-Parsnip Leaf.*

Bonduc vulgare, majus, polyphyllum. Plum. Nov. Gen. *The Yellow Nikar-Tree, vulgo.*

Bonduc vulgare, minus polyphyllum. Plum. Nov. Gen. *The Ash-colour'd Nikar-Tree, vulgo.*

Breynia Amygdali foliis latioribus. Plum. Nov. Gen. *Breynia, with broad Almond-tree Leaves*

Breynia Elœagni foliis. Plum. Nov. Gen. *Breynia, with leaves like those of Wild Olive.*

Cacao. Clus. Exot. *The Chocolate Nut-tree.*
Coa scandens, fructu trigemino subrotundo. Plum. Nov. Gen. *Climbing Coa, with a roundish Fruit opening in three Parts.*

Courbaril bifolia, flore pyramidato. Plum. Nov. Gen. *The Locust-tree of Jamaica.*

Cuiete foliis oblongis, angustis, magno fructu ovato. Plum. Nov. Gen. *The Calabash-tree, with long narrow-leaves and a large oval fruit.*

Cuiete latifolia, fructu putamine fragili. Plum. Nov. Gen. *Broad-leaf'd Calabash-tree, with a tender shell.*

Cuiete minima, fructu duro. Plum. Nov. Gen. *The least Calabash-tree, with a hard Fruit.*

Cuiete angustifolia, fructu minori, globoso. Plum. Nov. Gen. *Narrow-leaf'd Calabash-tree, with the least round Fruit.*

Cuiete angustifolia, fructu minori ovato. Plum. Nov. Gen. *Narrow leaf'd Calabash-tree, with the least oval Fruit.*

Gesnera arborescens, amplo flore fimbriato & maculoso. Plum. Nov. Gen. *Tree like Gesnera, with a large furbelow'd and spotted Flower.*

Gesnera amplo Digitalis folio tomentoso. Plum. Nov. Gen. *Gesnera, with a large Woolly Fox-glove-leaf.*

Guaia baria alia racemosa, foliis oblongis. Plum. *Sea-side Grape, with an oblong Leaf.*

Guaia baria alia racemosa, foliis latissimis. Houst. *Sea side Grape, with very broad Leaves.*

Guaia baria foliis minoribus & longioribus, fructu racemoso minimo atro-purpureo. Houst. *Sea-side Grape, with smaller and longer Leaves, and the least purple Fruit.*

Guajacum flore cœruleo, fructu subrotundo. Plum. Nov. Gen. *Lignum-vitæ, with a roundish, blue Fruit.*

Guajacum

A D D E N D A.

Guajacum flore cœruleo fimbriato, fructu tetragono. Plum. Nov. Gen. *Lignum vitæ*, with a blue fringed Flower, and a square Fruit.

Guanabanus folio amplissimo, flore roseo, fructu purpureo squamato. *Cherimonias*, with a large Leaf, a rose-colour'd Flower, and a Scaley purple Fruit.

Guanabanus fructu e viridi lutescente, molliter aculeato. Plum. Nov. Gen. *The Sour-Sop*, vulgo.

Guanabanus fructu aureo & molliter aculeato. Plum. Nov. Gen. *The Custard-Apple*, vulgo.

Guanabanus fructu subcœruleo. Plum. Nov. Gen. *The Sweet Sop*.

Guanabanus Persicæ folio, flore intus albo, exterius virescente, fructu nigricante squamato vulgo cherimolia. Fucill. Obs. *The Cherimolias*, or *Cherimonias*, vulgo.

Guazuma arbor Ulmi-folia, fructu ex purpura-nigro. Plum. Nov. Gen. *The Bastard Cedar-tree*, vulgo.

Hura Americana, Abutili Indici folio. Hort. Amst. *The Sand-box-tree*, vulgo.

Jasminum Arabicum, Castancæ folio, flore albo odoratissimo, cujus fructu Coffy in officinis dicuntur nobis. Com. Cat. *The Coffee-tree*.

Icaco fructu ex albo rubescente. Plum. Nov. Gen. *The Maiden Plum-tree*, vulgo.

Icaco fructu nigro. Plum. Nov. Gen. *The Jamaica Plum-tree*, vulgo.

Icaco fructu purpureo. Plum. Nov. Gen. *The Purple Plum-tree*.

Icaco fructu luteo. Plum. Nov. Gen. *The Hog Plum-tree*, vulgo.

Inga flore albo fimbriato, fructu dulci. Plum. Nov. Gen. *Inga*, with a white fringed Flower, and a sweet Fruit.

Karatas foliis altissimis & aculeatis. Plum. Nov. Gen. *The Penguin*, vulgo.

Mamei magno fructu Persicæ sapore. Plum. Nov. Gen. *The Mammee-Tree*, with a large Fruit.

Mançanilla Pyri facie. Plum. Nov. Gen. *The Machineel-Tree*.

Mançanilla Aquifolii foliis. Plum. Nov. Gen. *The Machineel-Tree*, with Holly-leaves.

Mançanilla lauri foliis oblongis. Plum. Nov. Gen. *The Machineel Tree*, with oblong Bay-leaves.

Melocactus Americanus, major, spinis albis longissimis recurvis. *The great Melon-thistle*, with long, crooked, white spines.

Melocactus Americanus, major, striis in spiram intortis, spinis brevibus aduncis. *The great Melon-thistle*, with spiral Ribs, and short crooked Spines.

Melocactus Americanus, major, spinis tenuibus flavescens. *Great Melon-Thistle*, with narrow, yellowish Spines.

Melocactus Mexicanus, spinis creberrimis corallinis latis & recurvis. Houst. *Great Melon-thistle from Mexico*, with broad, crooked Spines.

Mimosa five frutex sensibilis. Inst. R. H. *The sensitive Plant*.

Mimosa Humilis & frutescens, & spinosa, filiquis conglobatis. Plum. Cat. *The Humble plant*.

Mimosa folio lato fennæ spinoso. Boerh. Ind. alt. *The broad-leav'd, sensitive Plant*.

Mimosa frutescens & spinosa, tenui Acaciæ folio, flosculis plurimis vilosis in capitulum congestis. Houst. *Shrubby, and Prickly sensitive Plant*, with a Narrow Acacia-Leaf, and many small Flowers collected in a hairy Head.

Mimosa herbacea, procumbens & spinosa, caule anguloso, filiquis quadrivalvibus. Houst. Cat. *Trailing, Prickly, herbaceous, sensitive Plant*, with an angular Stalk and Square Pods.

Mimosa latifolia, filiquis latis articulatis. Houst. *Broad-leav'd sensitive Plant*, with broad, jointed Pods.

Mimosa frutescens spinosa & hirsuta, tenui Acaciæ foliis, filiquis articulatis. *Shrubby, Prickly and hairy, sensitive Plant*, with narrow Acacia Leaves and jointed Pods.

Mitella Americana, maxima, tinctoria. Inst. R. H. *Arnotto*, or *Anotto*.

Monbin arbor, foliis Fraxini, fructu luteo racemoso. Plum. Nov. Gen. *The Jamaica Hog-Plum-tree*.

Parkinsonia aculeata, foliis minutis uncostæ adnexis. Plum. Nov. Gen. *Prickly Parkinsonia*, with very small Leaves fixed to one Midrib.

Persæa, Clus Hist. *The Avocado or Avogatto Pear*, vulgo.

Pisonia aculeata, mas. Houst. *The Male Fingrigo*, vulgo.

Pisonia aculeata, fructu glutinoso & racemoso. Plum. Nov. Gen. *The Female Fingrigo*, with a branching, glutinous Fruit.

Pittonia arborescens, chamædryfolia, major. Plum. Nov. Gen. *Greater-Tree Pittonia*, with a Germander Leaf.

Pittonia arborescens Chamædryfolia, minor. Plum. Nov. Gen. *Smaller Tree Pittonia*, with a Germander Leaf.

Pittonia frutescens, folio carnosio, hirsuto & obtuso. Plum. Nov. Gen. *Shrubby Pittonia*, with a hairy, fleshy, obtuse Leaf.

Pittonia racemosa, Nicotianæ foliis fætidissimis. Plum. Nov. Gen. *Branching Pittonia*, with the most stinking Tobacco-leaves.

Plumeria flore roseo odoratissimo. Inst. R. H. *The Red Jasmine-tree*, vulgo.

Plumeria flore majore odorato & incarnato. *The Japan-Tree*, vulgo.

Plumeria flore niveo, foliis longis angustis & acuminatis. Inst. R. *Plumeria*, with a snow-white Flower, and long, narrow-pointed Leaves.

Plumeria foliis longissimis, & minus succulentibus, flore pallido. Houst. *Plumeria*, with

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with very long, deep succulent Leaves, and a pale Flower.

Plumeria folia latior obtusa, flore luteo minore Plumeria, with a broad obtuse Leaf, and a smaller Yellow Flower.

Poinciana flore pulcherrime. Inst. R. H. The Barbados Flower-fence, with a beautiful strip'd Flower.

Poinciana flore luteo. Houst. The Yellow Flower-fence.

Poinciana flore rubente. Houst. The redish Flower-fence.

Poinciana spinosa, vulgo Tara. Feuill obf. Prickly Flower-fence, commonly called Tara.

Pseudoacacia Americana, flore pyramidato coccineo. Plum. Cat. Gen. American False Acacia, with a pyramidal scarlet Flower.

Pseudoacacia Americana, filiquis alatis. Plum. Cat. The Dogwood Tree of Jamaica.

Pseudoacacia Americana, latifolia, floribus purpureis. Plum. Cat. Broad-leav'd American false Acacia, with purple Flowers.

Pseudoacacia Americana, ingens, fructu coccineo, nigra macula notato. Plum. Cat. American False-Acacia, with a scarlet Fruit, spotted with Black.

Pseudoacacia Americana, Fraxini folio, floribus violaceis. Plum. Cat. American False Acacia, with Ash-tree-Leaves, and violet Flowers.

Rauvolfia tetraphylla, latifolia. Plum. Nov. Gen. Four leav'd Rauvolfia, with broad Leaves.

Rauvolfia tetraphylla, angustifolia. Plum. Nov. Gen. Four-leav'd Rauvolfia, with narrow Leaves.

Sapindus foliis costæ innascentibus. Inst. R. H. The Soap-berry-tree.

Sapota fructu turbinato minori. Plum. Nov. Gen. Sapota, with a smaller, Top-shap'd Fruit.

Sapota fructu ovato, majori. Plum. Nov. Gen. The Mammee Sapota.

Tabernemontana lactescens, citrii foliis undulatis. Plum. Nov. Gen. Milky Tabernemontana, with waved citron Leaves.

Tabernemontana lactescens, Lauri folio, flore albo, filiquis rotundioribus. Houst. Milky Tabernemontana, with a Bay-leaf, a white Flower, and rounder Pods.

Tamarindus. Raii. Hist. The Tamarind-Tree.

Tapia arborea, tryphylla. Plum. Nov. Gen. The Garlick Pear, vulgo.

Telephoides Americanum, arborescens, fructu parvo, foliis acuminatis. Houst. Tree-American Bastard orpine, with a small Fruit, and pointed-leaves.

Telephoides Americanum, arborescens, foliis latis subrotundis & subtus incanis, fructu maximo. Houst. Tree American Bastard-orpine, with broad roundish Leaves, hoary underneath, and the largest Fruit.

Telephoides Americanum, arborescens, foliis latoribus subrotundis, fructu majore ex longo pedicelo pendulo. Houst. Tree-American Bastard-Orpine, with broader, roundish Leaves and a large Fruit hanging on a long footstalk.

Terebinthus major, Betule cortice, fructu triangulari. Sloan. Cat. The Greater Turpentine-tree, commonly called Birch-tree, in Jamaica.

Tithymaloides Lauro-Cerasi folio, non serrato. Hort. Elth. The Poison Bush of Barbados.

Tithymaloides frutescens, folio Anacamptrotis. Plum. Cat. Shrubby Poison-Bush, with an Orpine-leaf.

Vanilla flore viridi & albo, fructu nigrescente. Plum. Nov. Gen. Vanilla, with a green and white Flower and a black Fruit.

Vanilla flore violaceo, fructu breviori rubro. Plum. Nov. Gen. Vanilla, with a Violet Flower, and a short red Fruit.

Vanilla flore albo, fructu breviori corallino. Plum. Nov. Gen. Vanilla, with a white Flower and a short coral-coloured Fruit.

Xylon arboreum. J. B. The Cotton-Tree. *Xylon Americanum, fructu oblongo acuminato Lign.* Inst. R. H. American Cotton-shrub, with an oblong pointed Fruit.

Zinziber. C. B. P. The Ginger-Plant. *Zinziber latifolium, sylvestre.* H. L. The Broad-leav'd wild Ginger, or Zerumbet.

Ziziphus quæ jujube Americana, spinosa, Loti arboris foliis & facie, fructu rotundo parvo, dulei. Cat. H. Beaum. The American Jujube, commonly called Mangostens.

Arbor Americana, fraxini foliis, fructu conoidæ. The Mahogany-tree.

Arbor excelsa, Coryli folio ampliore. Houst. The Bastard Mahogany-tree.

Buddleja frutescens, foliis conjugatis & serratis, floribus spicatis luteis. Houst. Shrubby Buddleja, with saw'd leaves growing by pairs, and spiked yellow Flowers.

Buddleja frutescens, foliis oblongis, mucronatis, subtus tomentosis, floribus spicatis albis. Houst. Shrubby Buddleja, with oblong pointed Leaves woolly on their underside and spiked white Flowers.

Campechia. The Logwood.

Conocarpus. Hort. Clif. The Button-tree, vulgo.

Conocarpus procumbens, foliis subrotundis. Houst. Trailing Button-tree, with roundish leaves.

F f f f f Arbor

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Arbor Americana, pinnatis Fraxini foliis, fructu reniformi Phascolum exprimentate. Pluk. Phyt. *The Spanish Ash*, vulgo.

Lauro affinis jasmini folio alato, costa media membranulis utrinque extantibus alata, ligni duritie ferro vix cedens. Sloan. Cat. Jam. *The Iron Wood-tree*.

Lauro affinis Terebinthini folio alato, ligno odorato candido, flore albo. Sloan. Cat. *Lignum Rhodium, or Lignum-torum*.

Morus fructu viridi, ligno sulphureo tinctorio. Sloan. Cat. Jam. *Fustick-Wood*.

Pseudo-santalum croceum. Sloan. Cat. Jam. *The Bresleto-tree*.

A CATALOGUE of such MEDICINAL PLANTS
as may be Cultivated in the English Gardens, being hardy enough to bear the Cold in the open Air. Such of them as do grow in the Fields, and are generally termed Weeds, are also distinguished, that any Person, who is inclinable to Cultivate them, may know how to obtain them.

A Brotanum mas, angustifolium, majus. C. B. P. *Southernwood*

Absinthium vulgare, majus. J. B. Common Wormwood. English, in Lanes and on Dungbils

Absinthium Pontium, tenuifolium, incanum. C. B. P. *Roman Wormwood*

Absinthium marinum, album. Ger. Sea-Wormwood. English, On the Sea-shore

Acanthus fativus vel mollis. Virgilii. C. B. P. *Bears-breech*

Acetosa pratensis. C. B. P. Common Sorrel. English, In Meadows and other Pastures.

Acetosa arvensis lanceolato. C. B. P. Sheeps Sorrel. English, On dry gravelly soils.

Acetosa rotundifolia, hortensis. C. B. P. French Sorrel

Acorus verus sive Calamus Aromaticus officinarum. C. B. P. *The true Acorus*. English, In deep standing Waters, but pretty rare.

Adiantum foliis longioribus pulverulentis pediculo nigro. C. B. P. *Black Maiden-hair*. English, In joints of old Walls, and on the sides of shady Banks

Adiantum foliis coriandri. C. B. P. *The true Maiden-hair*

Agratum foliis serratis. C. B. P. Sweet Maudlin

Agerimonia officinarum. Inst. R. H. *Agrimony*. English, In Woods and shady Lanes.

Alcea vulgaris, major. C. B. P. *Ver-rain-Mallow*. English, In Pastures

Alchimilla vulgaris. C. B. P. *Ladies-Mantle*. English, In moist Pastures

Alkekengi officinarum. Inst. R. H. *Winter Cherry*

Allium sativum. C. B. P. *Garlick*

Alfene media. C. B. P. *Chick-weed*. English, In every Dungbil, and in every Garden

Althæa Dioscoridis & Plinii. C. B. P. *Marsh-mallows*. English, In moist Lanes.

Amaranthus maximus. C. B. P. *Flower Gentle*

Ammi majus. C. B. P. *Bishop's-weed*.

Anagallis phœnicio flore. C. B. P. *Pimpernel*. English, On Ploughed Lands

Anagallis cæruleo flore. C. B. P. *The Female Pimpernel*. English, On ploughed Lands, but pretty rare

Anchusa puniceis floribus. C. B. P. *Alkanet*

Anethum hortense. C. B. P. *Dill*

Angelica fativa. C. B. P. *Angelica*

Anonis spinosa, flore purpureo. C. B. P. *Red-Harrow*. English, On Commons and in other uncultivated Places

Anthora seu Aconitum salutiferum. C. B. P. *Wholesome Monks-hood*

Aparine vulgaris. C. B. P. *Clivers, or Goose-grass*. English, Under hedges, &c

Apium palustre & Apium officinarum. C. B. P. *Smallage*. English, In standing waters.

Apium hortense. Ger. *Garden-Parsley*.

Apium Macedonicum. C. B. P. *Macedonian Parsley*

Aquilegia sylvestris. C. B. P. *Wild Columbine*. English, In woods, but rare

Aristolochia clematidis recta. C. B. P. *Creeping Birthwort*

Aristolochia longa, verra. C. B. P. *Long Birthwort*

Aristolochia rotunda, flore ex purpurâ nigro. C. B. P. *Round Birthwort*

Artemisia

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Artemisia vulgaris, major. C. B. P. *Mugwort*. English, *On the sides of fields*.
Arum vulgare. Ger. *Wake-Robin*. English, *In woods and under Hedges*.
Arundo vulgaris, five *Phragmites* *Dioscoridis*. C. B. P. *The Reed*. English, *In deep Waters*.
Asarum vulgare. Park. *Asarabacca*. English, *In moist shady Places but rare*.
Asclepias flore albo. C. B. P. *Swallow-wort*, or, *Tame-Poison*.
Asparagus sativus. C. B. P. *Sparagas*.
Asperula five *Rubeola montana odora*. C. B. P. *Woodroof*. English, *In Woods, and shady Places*.
Alphodelus albus, *ramosus mas*. C. B. P. *The true white Asphodel*, or *King's-spear*.
Asphodelus luteus, & *flore*, & *radice*. C. B. P. *Yellow King's-spear*.
Asplenium five *Ceterach*. J. B. *Spleen-wort*, or *Milt-waste*. English, *On old Walls*.
Aster Atticus cæruleus, *vulgaris*. C. B. P. *Blue Italian Starwort*.
Attractylis lutea. C. B. P. *Yellow Staff-Thistle*.
Atriplex hortensis, *alba*, five *pallide virens*. C. B. P. *Garden-Orach*.
Atriplex foetida. C. B. P. *Stinking Orach*. English, *On Dungbills, and in cultivated Lands*.
Balsamita major. Dod. p. *Costmary*, or *Ale-coste*.
Bardana vulgaris, major. Park. *Burdock*. English, *By the Sides of Roads*.
Behen album, *officinatum*. J. B. *Spitting Poppy*. English, *On Arable Land*.
Bellis sylvestris, *caule folioso*, major. C. B. P. *Ox-eye Daisy*. English, *In Corn-fields, and in Pastures*.
Bellis sylvestris, minor. C. B. P. *Daisy*. English, *In Grass Fields*.
Berberis dumetorum. C. B. P. *The Berberry*, or *Pipperidge Bush*. English, *In some Hedges*.
Beta alba vel pallefcens, quæ *Cicla officinarum*. C. B. P. *The White Beet*.
Beta rubra, *vulgaris*. C. B. P. *The red Beet*.
Betonica purpurea. C. B. P. *Wood Betony*. English, *In woods, &c.*.
Bistorta radice minus intorta. C. B. P. *Bistort*, or *Snakeweed*. English, *In moist meadows*.
Blitum album, *majus*. C. B. P. *White Blites*.
Blitum rubrum, *majus*. C. B. P. *Red Blites*.
Borago floribus cæruleis. J. B. *Borrage*. English, *In arable Land*.
Botrys Ambrosioides vulgaris. C. B. P. *Oak of Jerusalem*.
Brassica capitata, *alba*. C. B. P. *Cabbage*.
Bryonia aspera, five *alba*, *baccis rubris*. C. B. P. *Briony*. English, *Under Hedges, and on the Sides of Banks*.
Bryonia levis, five *nigro*, *ramosa*. C. B. P. *Black Briony*. English, *In woods and under Hedges*.

Buglossum angustifolium, *majus*. C. B. P. *Garden Bugloss*.
Buglossum sylvestre, *minus*. C. B. P. *Wild Bugloss*. English, *On arable Land*.
Bugula vulgaris. Park. *Bugle*. English, *In moist Meadows and Woods*.
Bupthalmum cotulæ folio. C. B. P. *Ox-eye*.
Bursa pastoris, *majus*, *folio sinuato*. C. B. P. *Shepherd's Purse*. English, *By the sides of Paths every where*.
Buxus arborefcens. C. B. P. *The Box-tree*. English, *On Box-hill, near Darkin, in Surry*.
Calamintha vulgaris, vel *officinatum* *Germaniæ*. C. B. P. *Mountain Calamint*. English, *On uncultivated Land*.
Calamintha pulegiæ odore, five *Nepeta*. C. B. P. *Calamint with the scent of Penny-Royal*. English, *On the sides of Roads and other uncultivated Places*.
Calamintha arvensis verticillata. C. B. P. *Water Calamint*. English, *By the Sides of Ditches, and in moist arable Land*.
Calcitrapa flore purpureo. Vaill. *The Star-thistle*. English, *On the side of Banks*.
Caltha vulgaris. C. B. P. *Marigold*.
Cannabis sativa. C. B. P. *Hemp*. English, *On Dungbills*.
Capparis spinosa, *fructu minore*, *folio rotundo*. C. B. P. *Caper*.
Cardamine magno flore purpurascens. Inst. R. H. *Ladies-smock* or *cuckow-flower*. English, *In meadows*.
Cardiaca. Inst. R. H. *Mother-wort*. English, *By the Sides of Paths*.
Carduus albis maculis notatus, *vulgaris*. C. B. P. *Our Lady's thistle*. English, *On uncultivated Places*.
Carlina acaulos, *magno flore*. C. B. P. *The Carlina Thistle*.
Carthamus officinarum, *flore croceo*. Inst. R. H. *Safflower*, or *Bastard Saffron*.
Carui Cæsalp. *Carraway*. English, *On Dungbills, but rare*.
Caryophyllata vulgaris. C. B. P. *Avens* or *Herb-Bennet*. English, *In Woods and under Hedges*.
Caryophyllus altiss major. C. B. P. *Clove Gilly-flower*.
Centaurium majus, *folio in lacinias plures diviso*. C. B. P. *Great Centory*.
Centaurium minus. C. B. P. *Centory*. English, *In cultivated Lands and in Woods*.
Cepa vulgaris. C. B. P. *Onion*.
Chærophylum sativum. C. B. P. *Chervil*.
Chamædrys vulgo vera existimata. J. B. *Germander*. English, *On Chalky Lands*.
Chamæmelum nobile five *Leucanthemum odoratum*. C. B. P. *Camomile*. English, *On Commons and Heaths*.
Chamæmelum vulgare *Leucanthemum Dioscoridis*. C. B. P. *May-Weed*, *Field Camomil*. English, *On Arable Land, and Dungbills*.
Chamæpitrys lutea, *vulgaris*, five *folio trifido*. C. B. P. *Ground Pine*. English, *On arable Land*.

Chelidonium

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- Chelidonium majus*, vulgare. C. B. P. *Celandine*. English, In Woods, and under Hedges.
- Chelidonia rotundifolia*, minor. C. B. P. *Pilewort*. English, By the Sides of Ditches, and in other moist Places.
- Chenopodium folio triangulo*. Inst. R. H. English, Mercury or All-good. English, In Lanes, and unfrequented Places.
- Cicer sativum*. C. B. P. *Cicers*, or *Chick-Pease*.
- Cichorium sylvestre* five officinarum. C. B. P. *Wild Succory*. English, in Lanes and Commons.
- Cicuta major*. C. B. P. *Hemlock*. English, On the Side of Banks.
- Cinara hortenſis*, foliis aculeatis & non aculeatis. C. B. P. *Artichoke*.
- Cistus mas*, folio oblongo, incano. C. B. P. *Holy Roſe*.
- Cistus Ladanifera*, Cretica, flore purpureo. Tour. Cor. *The Gum Cistus*.
- Cnicus sylvestris*, hirsutior, five *Carduus Benedictus*. C. B. P. *Carduus*, or, *The Blessed Thistle*.
- Cochlearia folio subrotundo*. C. B. P. *Scurvy-Grass*.
- Cochlearia folio sinuato*. C. B. P. *Sea Scurvy-Grass*. English, In Salt Marshes.
- Conyza minor*, flore globosa. C. B. P. *Flea-bane*. English, On Chalky, uncultivated Ground.
- Coriandrum majus*. C. B. P. *Coriander*.
- Coronopus sylvestris*, hirsutior. C. B. P. *Bucks-horn-Plantain*. English, On Commons and uncultivated Places.
- Coronopus Ruelli*. J. B. *Swines Cress*. English, On moist Commons.
- Corylus sylvestris*. C. B. P. *Hazel*. English, In Woods.
- Cotula fetida*. Dod. *Stinking Camomil*. English, On arable Land.
- Cotyledon major*. C. B. P. *Navel-wort*, or *Wall Pennywort*. English, On the sides of Banks, but rare.
- Crithmum* five *Foeniculum maritimum*, minus. C. B. P. *Sampire*. English, On the Rocks by the Sea-side.
- Crocus sativus*. C. B. P. *Saffron*.
- Cruciata hirsuta*. C. B. P. *Cross-wort*. English, By the Sides of Hedges.
- Cucumis sylvestris asininus dictus*. C. B. P. *Wild-Cucumber*.
- Cucumis sativus*, vulgaris. C. B. P. *Garden Cucumber*.
- Cupressus meta in fastigium convoluta*, quæ femina Plinii. C. B. P. *The Common Cypress*.
- Cyanus montanus*, latifolius vel *Verbasculum Cyanoides*. C. B. P. *The Great Blue-Bottle*.
- Cyanus minor* five *segetum*. C. B. P. *The small Blue-bottle*. English, Amongst Corn, &c.
- Cyclamen Hedera folio*. C. B. P. *Sow-bread*.
- Cynoglossum majus*, vulgare. C. B. P. *Hounds-tongue*. English, By Hedges Sides, and in other uncultivated Places.
- Cyperus odoratus*, radice longa, five *Cyperus officinarum*. C. B. P. *Long Cyprus*.
- Daucus folia Foeniculi tenuissima*. C. B. P. *Daucus of Cete*, or, *Candy Carrot*.
- Daucus vulgaris*. Clus. Hist. *Wild Carrot* or *Birds-nest*. English, On the Side of Paths, and other uncultivated Places.
- Delphinium majus*, five vulgare. Park. *Larks-Spur*.
- Dens leonis latiore folio*. C. B. P. *Dandelion*. English, On Walls, and in Grass-fields every where.
- Digitalis purpurea*, folio aspero. C. B. P. *Fox-Glove*. English, On the sides of Banks, and in other uncultivated Places.
- Dipsacus sativus*. C. B. P. *The Manned teasel*.
- Dipsacus sylvestris* aut *Virga pastoris major*. C. B. P. *The wild Teasel*. English, On dry Banks.
- Doronicum radice scorpii*. C. B. P. *Leopard's-bane*.
- Dracunculus polyphyllus*. C. B. P. *Dragons*.
- Echium vulgare*. C. B. P. *Vipers-Bugloss*. English, On Fallow'd Land, and amongst the Corn.
- Elatine folio subrotundo*. C. B. P. *Fluellin* or *Female Speedwell*. English, On arable Land.
- Endivia latifolia sativa*. C. B. P. *Endive*.
- Equisetum palustre*, longioribus setis. C. P. P. *Horse-tail*. English, By the side of Ditches, and other moist places.
- Eruca latifolia*, alba, sativa *Dioscoridis*. C. P. P. *Rocket*.
- Eryngium maritimum*. C. P. P. *Eryngo*. English, On the Sea-shores.
- Erysimum vulgare*. C. P. P. *Hedge Mustard*. English, On Walls, and by the waysides, very common.
- Eupatorium cannabinum*. C. P. P. *Hemp-leav'd Agrimony*. English, By the sides of Ditches, and standing Waters.
- Euphrasia officinarum*. C. B. P. *Eye-bright*. English, In Commons, and uncultivated Fields.
- Faba*. C. B. P. *The Garden Bean*.
- Faba minor*, five *Equina*. C. P. P. *The Horse-Bean*.
- Filipendula vulgaris*, an molon Plinii. C. P. P. *Dropwort*. English, On Commons, &c.
- Filix ramosa*, major, pinnulis obtusis non dentatis. C. P. P. *Female Fern*. English, On Commons and Heaths.
- Filix non-ramosa*, dentata. C. P. P. *The Male-Fern*. English, On the side of Banks, and in Woods.
- Foeniculum vulgare*, Germanicum. C. P. P. *Fennel*. English, On uncultivated Ground.
- Foeniculum dulce*. C. B. P. *Sweet-Fennel*.
- Foenum Græcum sativum*. C. B. P. *Fenugreek*.

Fragaria

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Fragaria vulgaris. C. P. P. *Straw-berry.*
English, *In woods*
Frangula seu Alnus nigra, baccifera. Park.
Berry-bearing Alder. English, *In moist Woods.*
Fraxinella. Clus. Hist. *Fraxinella or White*
Dittany
Fumaria officinarum & Dioscoridis.
C. P. P. *Fumitory.* English, *On arable*
Land

Galega vulgaris. C. B. P. *Goats-Rue.*
Gallium luteum. C. B. P. *Ladies Bed-*
straw or Cheese-Rening. English, *On the side*
of Banks, in Meadows
Genista angulosa & scoparia. C. P. P.
Broom. English, *On Commons, &c.*
Gentiana major, lutea. C. P. P. *Gentian*
or Felwort
Geranium folio malvæ rotundo. C. B. P.
Doves-foot, Cranes-bill. English, *On the side*
of Banks
Geranium moschatum. C. P. P. *Musk-*
Cranes-bill. English, *In unfrequented lanes,*
but rare
Geranium Robertianum, primum. C. B. P.
Herb-Robert. English, *by Hedges.*
Glycyrrhiza filiquosa, vel Germanica.
C. B. P. *Liquorice*
Gnaphalium vulgare, majus. C. B. P.
Cudweed. English, *on Commons, &c.*
Gramen Canium arvense five Gramen
Dioscoridis. C. P. P. *Dog-grass or Couch-*
grass. English, *On arable Land every where.*
Gratiola Centauroides. C. P. P. *Hedge-*
hyssop
Grossularia spinosa, fativa. C. B. P.
Goose berry

Harmala. Dod. p. *Wild-Rue*
Hedera arborea. C. P. P. *Ivy.* English,
climbing on Trees
Hedera terrestris vulgaris. C. P. P.
Ground-Ivy or Ale-hoof. English, *Under*
hedges and on Bank sides
Helenium vulgare. C. B. P. *Elecam-*
pane
Helleborus albus, flore subviridi. C. P. P.
White Hellebore
Helleborus niger, flore roseo. C. P. P.
Black Hellebore
Hepatica flore simplici cæruleo. Clus.
Hist. *Noble Liverwort*
Herba Paris Ger. *Herb Paris, One Berry*
or true Love. English, *In shady Woods.*
Herniaria glabra. J. n. *Rupturewort.*
Hieracium majus, folio Sonchi. C. P. P.
Hawkweed. English, *On the Way sides pretty*
Common
Hordeum distichum. C. P. P. *Barley*
Horminum Sclarea dictum. C. B. P.
Clary
Horminum sylvestre Lavendulæ flore.
C. B. P. *Wild Clary.* English, *On uncul-*
tivated fields
Hyacinthus oblongo flore cæruleus major.
C. B. P. English, *Hair Bells, in Woods and*
under Hedges

Hyoscyamus albus, Major. C. B. P.
White Henbane
Hyoscyamus vulgaris niger. C. B. P.
Black Henbane. English, *On Commons and*
uncultivated Land
Hypericum vulgare. C. B. P. *Saint John's*
Wort. English, *Under Hedges and by the*
Way-sides
Hyssopus officinarum, cœrulea seu spicata.
C. B. P. *Hyssop*

Jasminum vulgatus, flore albo. C. P. P.
Jasmine
Iberis latiore folio. C. B. P. *Sciatica-*
Cress
Imperatoria major. C. B. P. *Masterwort*
Iris alba, Florentina. C. B. P. *Orris*
Iris vulgaris, Germanica, five sylvestris.
C. B. P. *Garden-Flower-de-luce.*
Iris sylvestris foetida. Inst. R. H. *Stin-*
king Gladwin English, *in Woods and moist*
uncultivated places
Iris palustris lutea. Ger. *Bastard Acorus.*
English, *In standing waters*
Isatis fativa vel latifolia. C. B. P. *Wood*
Juniperus vulgaris, fruticosa. C. B. P.
Juniper. English, *On Heaths*

Kali majus, cochleato semine. C. B. P.
Glass-wort
Lactuca fativa. C. B. P. *Lettuce*
Lamium album, non foetens, folio oblongo.
C. B. P. *White Archangel.* English, *Under*
Hedges

Lamium purpureum, foetidum, folio sub-
rotundo, five Galeopsis Dioscoridis. C. B. P.
Red Archangel, or Dead Nettles. English,
On the sides of Banks
Lapathum folio acuto, plano. C. B. P.
Sharp-pointed Dock. English, *In Fields and*
uncultivated Places
Lapathum aquaticum, folio cubitali.
C. B. P. *The great Water Dock.* English, *In*
standing Waters

Lapathum hortense, rotundifolium, five
Montanum. C. B. P. *Bastard Monks Rhu-*
barb

Lapathum folio acuto, rubente. C. B. P.
Bloodwort. English, *On the Way side.*

Lapathum hortense, folio oblongo, five
secundum Dioscoridis. C. B. P. *Patience.*

Lapathum hortense, latifolium. C. B. P.
True Monks Rhubarb

Lapathum præstantissimum, Rhabarbarum
officinarum dictum. Moris. *Rhapontic.*

Lavendula angustifolia. C. B. P. *La-*
vender

Lavendula latifolia. C. B. P. *Labender-*
Spike

Laureola semper-virens flore viridi, qui-
busdam Laureola mas. J. B. *Spurge-Laurel.*
English, *In Woods*

Laureola folio deciduo, flore purpureo,
officinis Laureola formina. C. B. P. *Me-*
zereon, or Spurge Olive.

A D D E N D A.

- Laurus vulgaris.* C. B. P. *The Bay.*
Lens vulgaris. C. B. P. *The Lentil.*
Lenticula palustris vulgaris. C. B. P.
Ducks-meat. English, *On the Surface of standing Waters every where.*
Lepidum latifolium. C. B. P. *Dittander,* or *Pepperwort.* English, *On uncultivated Ground, but not very common.*
Leucoium incanum, majus. C. B. P. *Stock-Gilly-flower*
Leucoium luteum, vulgare. C. B. P. *Wall-flower.* English, *On old Walls and Buildings*
Levisticum vulgare. C. B. P. *Levage.*
Lichen terrestris cinereus. Raii Syn. *Asb colour'd Ground Liverwort.* English, *On Heaths and Commons*
Ligustrum Germanicum. C. B. P. *Privet.* English, *In Hedges*
Lilium album, flore erecto & vulgare. C. B. P. *The White Lilly.*
Lilium Convallium, album. C. B. P. *Lillies of the Valley* English, *In shady Woods*
Limonium maritimum, majus. C. B. P. *Sea Lavender.* English, *In the Salt Marshes.*
Linaria vulgaris, lutea, flore majore. C. B. P. *Toad-flax.* English, *On the side of Banks*
Lingua Cervina, officinarum. C. B. P. *Hart's-tongue.* English, *On the Wall of Wells, and in other moist Places*
Linum sativum. C. B. P. *Flax*
Linum pratense, flosculis exiguis. C. B. P. *Mountain or Purging Flax.* English, *In Meadows and Pastures.*
Lithospermum majus, erectum. C. B. P. *Gromill or Grey Mill.* English, *On uncultivated Land*
Lotus hortensis, odora. C. B. P. *Sweet Trefoil*
Lunaria racemosa, minor. C. B. P. *Meon-wort.* English, *On Commons and Heaths.*
Lupinus sativus, flore albo. C. B. P. *White Lupin*
Lupulus mas & foemina. C. B. P. *Hop.*
Lycopersicon fructu cerasi. Inst. R. H. *Love-Apple*
Lyfimachia lutea, major. C. B. P. *Loose-strife.* English, *On the side of Ditches.*

Majorana vulgaris. C. B. P. *Sweet Marjoram*
Malva sylvestris, folio sinuato. C. B. P. *Mallow.* English, *On Banks and in uncultivated Places*
Malva rosea, folio subrotundo. C. B. P. *Hollybock*
Mandragora fructu rotundo. C. B. P. *Mandrake*
Marrubium album, vulgare. C. B. P. *White Horehound.* English, *On dry chalky Land*
Marrubium nigrum, foetidum, Pallote Dioscoridis. C. B. P. *Black or stinking Horehound.* English, *On Banks, and by the Way-side*
Marum vulgare. Ger. *Herb-mastick or Mastick-Thyme*

Marum Syriacum vel Creticum. H. L. *Marum or Syrian Mastick*
Matricaria vulgaris vel fativa. C. B. P. *Fever-few.* English, *On Dungbills and in unfrequented Lanes*
Melilotus officinarum Germaniae. C. B. P. *Melilot.* English, *By the side of cultivated Fields*
Melissa hortensis. C. B. P. *Balm.*
Mentha angustifolia, spicata. C. B. P. *Mint or Spear-Mint*
Mentha rotundifolia, palustris, seu aquatica major. C. B. P. *Water-Mint.* English, *In Ditches, and shallow Waters*
Mentha spicis brevioribus & habitioribus, foliis Menthae fuscae sapore fervide Piperis. Raii Syn. *Pepper-Mint.* English, *In watry Places*
Mentha sylvestris longiore folio. C. B. P. *Herse-Mint.* English, *In uncultivated Places.*
Mercurialis testiculata five mas, & spicata five foemina Dioscoridis & Plinii. C. B. P. *French Mercury* English, *On the way-side*
Mespilus Apii folio, sylvestris, spinosa five oxyacantha. C. B. P. *The white Thorn or Haw-thorn.* English, *In Hedges.*
Mespilus vulgaris. J. B. *The common Medlar*
Meum foliis Anethi. C. B. P. *Mew or Spignel*
Milium femine luteo vel albo. C. B. P. *Millet*
Millefolium vulgare, album. C. B. P. *Tarrow Milfoil or Nose-bleed.* English, *By the paths-sides every where*
Myrrhis magno semine, longo, fulcato. J. B. *Sweet Cicely or Sweet Fern.*

Napus sativus. C. B. P. *Sweet Navew, or French Turnep*
Napus sylvestris. C. B. P. *Wild Navew, or Cole-seed* English *On Banks.*
Nasturtium aquaticum, supinum. C. B. P. *Water-Cress.* English, *In Ditches and standing Waters*
Nasturtium hortense, vulgatum. C. B. P. *Garden-Cress*
Nepeta major, vulgaris. Park. *Nep, or Catmint* English, *On chalky, dry Fields.*
Nicotiana major, latifolia. C. B. P. *Tobacco*
Nigella flore minore, simplici candido. C. B. P. *Fennel-Flower*

Ocymum vulgatus. C. B. P. *Basil.*
Olca fativa. C. B. P. *The Olive Tree.*
Ophyoglossum vulgatum. C. B. P. *Adders-tongue.* English, *In moist Meadows.*
Origanum sylvestre. Cunila bubula. Plinii. C. B. P. *Wild Marjoram,* English, *On dry uncultivated Places*
Origanum onites. C. B. P. *Origan of Crete*
Orchis morio mas, foliis maculatis. C. B. P. *Male-Satyrium or Fools-stones.* English, *In Woods and moist Meadows*

Orchis

A D D E N D A

Orchis morio foemina C. B. P. *Female Satyrium*. English, *In Meadows*
Orobis filiquis articulatis, femine majore. C. B. P. *Bitter-Vetch*
Osmunda Regalis. Ger. *Flowering Fern* or *Osmund-Royal*
Oxys. Inst. R. H. *Wood-Sorrel* English, *In moist woods*

Paeonia foemina, flore rubro, majore. C. B. P. *Piony*
Paeonia folio nigricante splendido, quæ mas. C. B. P. *Male Piony*
Panax Coloni & Marrubium aquaticum, acutum. Ger. *Clowns-Allheal*. English. *By the side of Ditches and other Watery Places*.
Panax Pastinacæ folio, C. B. P. *Hercules's-Allheal*
Panicum Germanicum, five *Panicula minore*. C. B. P. *Panick*
Papaver hortense femine, albo. C. B. P. *White Poppy*
Papaver hortense femine, nigro. C. B. P. *Black Poppy*
Papaver erraticum Rhoia's *Dioscoridi*. Theophrasti. Plinio. C. B. P. *Red Poppy*. English, *On arable Land*
Parietaria officinarum. C. P. P. *Pellitory of the Wall*. English, *On Walls*.
Paronychia rutaceo folio. Ger. *Blue-leav'd whitlow-grass*. English, *On Walls and Buildings*
Pastinaca fativa, latifolia. C. B. P. *Parsnep*
Pastinaca sylvestris latifolia. C. B. P. *Wild Parsnep*. English, *On uncultivated Places*
Pentaphylloides Argentina dicta Raii. Syn. *Silver-weed* or *Wild Tansey*. English, *On moist Commons, and on the side of Ditches*.
Perfoliata vulgarissima, five *arvensis*. C. B. P. *Therow-wax*. English, *On arable Land*
Periclymenum non perfoliatum Germanicum. C. B. P. *Honey-suckle*. English, *In Hedges*
Perficaria mitis maculosa. C. B. P. *Spotted Arsmart*. English, *On Dungbills*.
Perficaria urens seu Hydropiper. C. P. P. *Arsmart*, or *Water Pepper* English *By the side of Ditches and in other Watery Places*.
Petasites major & vulgaris. C. B. P. *Butter-bur*. English, *By Ditches sides*.
Peucedanum Germanicum. C. B. P. *Hogs-Fennel* or *sulphurwort*. English, *But very rare*.
Phellandrium vel Cicutaria aquatica quorundam. J. B. *Water-Hemlock*. English, *In standing Waters*
Pilosella major, repens, hirsuta. C. B. P. *Moose-ear*. English, *On walls and dry gravelly Commons*
Pimpinella sanguisorba, minor. C. B. P. *Burnet*. English, *On Chalky Ground*.
Pimpinella saxifraga, major, umbellâ candida. C. B. P. *Burnet Saxifrage*. English, *Under Hedges and by the side of Fields*.
Pimpinella Saxifraga major, altera. C. B. P. *The lesser Burnet Saxifrage* English, *In Pastures*.

Pisum arvense, flore candido, fructu rotundo albo. C. B. P. *Pease*
Plantago latifolia, sinuata. C. B. P. *Plantain*. English, *In moist Places*.
Plantago angustifolia, major. C. B. P. *Narrow-leav'd Plantain* or *Ribwort* English, *On Dungbills, and by the way-side every where*.
Plumbago quorundum. Clus. H. *Toothwort*, or *Lead-wort*
Polium maritimum, erectum, Monspe-liacum. C. B. P. *Poley-mountain*.
Polium angustifolium, Creticum. C. B. P. *Poley of Crete*
Polygonatum latifolium, vulgare. C. B. P. *Solomon's Seal*. English, *In some Woods, but not Common*
Polygonum latifolium C. B. P. *Knot-grass*. English, *In uncultivated Places*.
Polypodium vulgare. C. B. P. *Polypody*. English, *On Shady Banks and Walls*.
Porrum commune, capitatum. C. B. P. *The Leek*
Portulaca latifolia, seu *fativa*. C. B. P. *Purslane*
Primula veris. Inst. R. H. *Primrose*. English, *In Woods and under Hedges*
Primula veris, major. Ger. *Cowslip* or *Pagels*. English, *In Meadows*.
Prunella major folio non dissecto. C. B. P. *Self-heal*. English, *In meadows and pasture Land*
Prunus sylvestris. C. B. P. *The Sloe-tree*. English, *In Hedges*
Psyllium majus, erectum. C. B. P. *Fleawort*
Ptarmica vulgaris, folio longo serrato, flore albo J. E. *Sneezwort*. English, *In Woods and under Hedges*
Pulegium latifolium. C. B. P. *Penny-Royal*. English, *On moist Commons*
Pulegium angustifolium. C. B. P. *Harts-Penny-Royal*
Pulmonaria maculosa, latifolia. Park. *Spotted Lungwort* or *Jerusalem Sage*.
Punica fativa. Inst. R. H. *Pomegranate*.
Punica sylvestris flore pleno majore. Inst. R. H. *The wild Pomegranate, with a large double Flower*.
Pyrethrum Hispanicum. C. B. P. *Pellitory of Spain*
Pyrola rotundifolia, major. C. B. P. *Winter-Green*. English, *In Shady Woods in the North*.
Quinquefolium majus, repens. C. B. P. *Cinquefoil*. English, *In Pastures*.
Ranunculus pratensis, radice verticilli modo rotundo. C. B. P. *Crow-foot*. English, *In Pastures*
Ranunculus Apii folio, lævis. C. B. P. *Marsh Crow-foot*. English, *In standing Waters, very common*
Raphanus minor oblongus. C. B. P. *Radish*
Raphanus rusticanus. C. B. P. *Horse-Radish*. English, *On Dungbills and by the side of fields*

Rapa

A D D E N D A.

- Rapa rotunda sativa. C. B. P. Turnep
 Rhamnus Catharticus. C. B. P. Buck-
 thorn. English, In Hedges
 Rhus folio Ulmi. C. B. P. Sumach.
 Ribes vulgaris, fructu rubro. H. L. Red
 Currans
 Ros folio folio rotundo. C. B. P. Rosa-
 folis or Sun-dew. English, On Commons where
 there are Bogs
 Rosa alba, vulgaris, major. C. B. P.
 The White Rose
 Rosa Damascena, flore pleno. Hort. Eyft.
 The Damask Rose
 Rosa rubra, multiplex. C. B. P. The
 red Rose
 Rosa Sylvestris, vulgaris, flore odorato,
 incarnato. C. B. P. The Dog-Rose, or Wild
 Briar. English, In Hedges.
 Rosmarinus hortensis, angustiore folio.
 C. B. P. Rosemary
 Rubia tinctorum, sativa. C. B. P.
 Madder
 Rubus vulgaris, five Rubus fructu nigro
 C. B. P. The Bramble, or Black-berry. En-
 glish, By Hedges very common
 Rubus Idæus spinosus, fructu rubro. J. B.
 Raspberry-bush. English, In some Woods.
 Ruscus Myrtifolius, aculeatus. Inst. R. H.
 Kneholm, or Butchers-broom. English, In
 Woods, and on Commons
 Ruscus latifolius, fructu folio innascente.
 Inst. R. H. Horse-tongue, or double-tongue.
 Ruscus latifolius, fructu folio insidente.
 Inst. R. H. The Bay of Alexandria.
 Ruta hortensis, latifolia. C. B. P. Rue.
 Ruta Muraria. C. B. P. White Maiden-
 hair or Wall Rue. English, On Walls, and
 other Buildings in moist Places.
 Sabina folio Tamarisci Dioscoridis. C. B. P.
 Savin
 Salvia nigra. C. P. P. Common Red Sage.
 Salvia minor, aurita & non aurita. C. B. P.
 Sage of Virtue
 Sambucus fructu in umbella nigro. C. B. P.
 Elder. English, In Hedges.
 Sambucus racemosa, rubra. C. B. P.
 Mountain Elder
 Sambucus humilis, five Ebulus. C. P. P.
 Dwarf Elder, or Danewort. English, But
 not common
 Sanicula officinarum. C. B. P. Sanicle.
 English, In woods, and shady Places.
 Santolina foliis teretibus. R. H. Laven-
 der-cotton
 Saponaria major, lævis. C. B. P. Sopewort.
 English, On the side of Banks.
 Satureia hortensis, five cunila sativa.
 Plinii. C. B. P. Savory
 Satureia montana, durior. C. B. P. Win-
 ter Savory
 Saxifraga rotundifolia, alba. C. B. P.
 white Saxifrage. English, In Meadows.
 Scabiosa pratensis, hirsuta, quæ offic-
 inarum. C. B. P. Scabious. English, On
 Arable Land
 Scabiosa radice succisa, flore globoso.
 Raii Syn. Devils-bit or Wood scabious. En-
 glish, In woods and Under Hedges.
 Scordium legitimum. Park. Scordium or
 Water Germander. English, In watery Places,
 but not common
 Scordium alterum, five salvia agrestis,
 C. B. P. Wood-sage. English, In Woods and
 on Heaths
 Scorzonera latifolia, sinuata. C. B. P.
 Scorzonera or Vipers-grass
 Scrophularia nodosa, foetida. C. B. P.
 Figwort. English, In woods and shady Places.
 Scrophularia aquatica, major. C. B. P.
 Water-Figwort, or Water-Betony. English, By
 the side of Ditches.
 Secale hybernum vel majus. C. P. P.
 Rie
 Sedum majus, vulgare. C. B. P. House-
 leek. English, On House-tops and Walls.
 Sedum minus teretifolium, album. C. B. P.
 Lesser House-leek. English, On Walls, &c.
 Sedum minus, vermiculatum, acre. C. B. P.
 Wall-Pepper, or Stone-crop. English, On
 Walls and Buildings
 Senecio minor, vulgaris. C. B. P. Ground-
 sel. English, On Walls, and on arable Lands,
 and also by-paths every where
 Serpyllum vulgare, minus. C. B. P. Mo-
 ther of Thyme. English, On Heaths and Com-
 mons
 Sefeli pratense, Silaus fortè Plinio. C. B. P.
 Meadow Saxifrage. English, In moist Pastures.
 Siler montanum, majus. Mor. Umb. Siler
 Mountain, Bastard Lovage, or Common Hart-
 wort
 Sinapi Rapi folio. C. B. P. Mustard.
 English, On Dungbills, &c.
 Sinapi hortense, semine albo. C. P. P.
 white Mustard.
 Sifarum Germanorum. C. B. P. Skirret.
 Sium latifolium. C. B. P. Broad leav'd
 Water-Parsnep. English, In standing Waters.
 Sium aromaticum, sison officinarum. Inst.
 R. H. The German or Common Anomum.
 English, Under Hedges and in shady Lawes
 Smyrnium Math. Alexanders. English,
 By the Side of Fields, but not common
 Solanum hortense. Ger. Night-shade.
 English, On Dungbills
 Solanum scandens seu Dulcamara. C. B. P.
 Woody Night-shade. English, In Hedges
 Soldanella maritima, minor. C. P. P.
 Sea Colewort or Sea Bindweed. English, On
 the Sea-shore
 Sonchus asper, laciniatus. C. B. P. Prickly
 Sow-thistle. English, On arable Land.
 Sonchus lævis laciniatus, latifolius. C. P. P.
 Smooth Sow-thistle. English, With the former
 Sophia Chirurgorum. Ger. Flixweed.
 English, On arable Land
 Sorbus sativa. C. B. P. The true Service
 Sorbus torminalis. Ger. The wild Service.
 English In Hedges
 Spinachia vulgaris, capsula feminis a-
 culeata. Inst. Spinach
 Staphisagria. Math. Staves-acre
 Stachas

A D D E N D A.

Stoechas purpurea. C. B. P. *Stoechas*,
French *Lavender*, or *Stickadove*.

Stoechas Citrina, tenuifolia, Narbonensis.
J. B. *Goldy-locks*

Stramonium fructu spinoso, oblongo flore
albo. Inf. R. H. *Thorn-apple*. English,
On Dungbills

Symphytum consolida major, foemina,
flore albo vel pallide luteo. C. B. P.
Comfrey. English, *In uncultivated Places*.

Tamariscus Narbonensis. Lob. *Ta-*
marisk

Tanacetum vulgare, luteum. C. B. P.
Tansy English, *In unfrequented Lanes*.

Telephium vulgare. C. B. P. *Orpine*.
English, *In Woods and moist Land*.

Thapsia Carotæ folio. C. B. P. *Deadly-*
Carrot

Thlaspi arvense, siliquis latis. C. B. P.
Treacle Mustard English, *In arable Land*,
but rare

Thlaspi arvense, Vaccariæ incano folio,
majus. C. B. P. *Mithridate-Mustard*. En-
glish, *In arable Land, and near Hedges*.

Thuya Theophrasti. C. B. P. *Tree of Life*.
Thymelæa foliis Lini. C. B. P. *Spurge-*
Flax

Thymus vulgaris, folio tenuiore. C. B. P.
Thyme

Tithymalus latifolius, Cataputia dictus.
H. L. *Garden-spurge*

Tithymalus palustris, fruticosus. C. B. P.
German-spurge, or *Greater Esula*.

Tithymalus foliis Pini, fortè *Dioscoridis*
Pytyusa. C. B. P. *The lesser Esula*.

Tragacantha. C. B. P. *Goats-thorn*.

Tormentilla sylvestris. C. B. P. *Tor-*
mentil English, *On Heaths*.

Trichomanes five polytrichum officinarum.
C. B. P. English, *Maiden-hair*. *On Walls*,
and the side of shady Banks.

Trifolium pratense, purpureum, majus.
C. B. P. *Trefoil*. English, *In Pastures*.

Trifolium arvense, humile spicatum, five
Lagopus. C. B. P. *Hares-foot*. *Trefoil*. En-
glish, *On arable Land*

Trifolium palustre. C. B. P. *Bog-bean*,
or *Marsh-Trefoil*. English, *On Bogs*.

Triticum hybernum, aristis carens.
C. B. P. *Wheat*

Tussilago vulgaris. C. B. P. *Colts-foot*.
English, *On barren Land*

Valeriana hortensis, Phu folio olufatri.
Dioscoridis. C. B. P. *Valerian*.

Valeriana palustris, minor. C. B. P. *The*
lesser Valerian. English, *On moist Meadows*,
and in Woods

Valeriana sylvestris, major, foliis angus-
tioribus. Rand. *Wild Valerian*. English,
In Chalky Closes

Verbascum mas latifolium, luteum. C. B. P.
Mullein. English, *On dry Banks, and sandy*
Land

Verbena communis, cœruleo flore. C. B. P.
Vervain. English, *Near Farm Yards*

Veronica mas supina & vulgatissima.
C. B. P. *Speedwell*, or *Pauls-Betony*. En-
glish, *In Woody Places*.

Veronica aquatica, major, folio subrotundo
Mor. Hist. *Brooklime*. English, *In standing*,
Water

Vicia sativa, vulgaris, semine nigro.
C. B. P. *Vetch or Tare*

Viola martia purpurea, flore simplici
odoro. C. B. P. *Violet*. English, *In Woods*
and near Hedges

Viola tricolor, hortensis, repens. C. B. P.
Hearts-Ease, or *Pansies*

Vinca pervinca, vulgaris. Ger. *Periwinkle*.
English, *In Hedges and Woods*.

Virga aurea angustifolia, minus serrata.
C. B. P. *Golden-Rod*. English, *In Woods*
and near Hedges

Vitex foliis angustioribus, Cannabis modo
dispositis. C. B. P. *The Chaste Tree*.

Vitis Idæa foliis oblongis crenatis, fructu
nigricante. C. B. P. *Bill-berry*. English,
On Moory Heaths

Vitis Vinifera. C. B. P. *The Vine*.

Ulmaria. Clus. *Meadow Sweet*, or *Queen of*
the Meadows. English, *In moist Meadows*,
and by the side of Ditches

Urtica urens, maxima C. B. P. *Nettle*.
English, *By Hedges and Banks*.

Urtica urens, pilulas ferens sanctissima
Dioscoridis, semine lini. C. B. P. *The Roman*
Nettle.

Xanthium. Dod. *The Lesser-Burdock*.

Zea Briza dicta, vel monococco Germanica.
C. B. P. *Spelt*, or *St. Peter's-Corn*.

A D D E N D A

A CATALOGUE of the LARGE TREES which are placed in the London Dispensary, as MEDICINAL PLANTS, but generally grow too large to be admitted into small Gardens.

ABIES Mas, conis sursum spectanti-
bus. C. B. P. *The silver Fir.*

Abies tenuiore folio, fructu decursum in-
flexo. C. B. P. *The common, or Spruce Fir,*
or Pitch-Tree

Amygdalus fativa. C. B. P. *The Almond*
Tree

Armeniaca fructu majore. Inst. R. H.
The Apricock

Betula. C. B. P. *The Birch-tree. Eng-*
lish, In Woods

Castanea fativa. C. B. P. *The Chestnut-*
tree

Cerasus major ac sylvestris, fructu subdul-
ci nigro colore inficiente. C. B. P. *The*
Black Cherry. English, In Hedge-rows, and
some Woods

Cerasus fativa, rotunda, rubra & acida.
C. B. P. *The red Cherry*

Cydonia fructu oblongo, laeviori. Inst.
R. H. *The Quince-tree*

Ficus communis. C. B. P. *The Fig-*
tree

Fraxinus excelsior. C. P. B. *The Ash-*
tree. English, In Hedge-rows

Fraxinus rotundior folio. C. B. P. *The*
Manna Ash

Ilex aculeata Cocciglandifera. C. B. P.
The Kermes Oak

Larix folio deciduo, conifera. J. B. *The*
Larch Tree

Malus sylvestris, acido fructu albo. Inst.
R. H. *The Crab-tree, English, In Hedges*
Malus fativa, Raii Syn. *The Apple-tree*
Morus fructu nigro. C. B. P. *The Mul-*
berry

Nux juglans five Regia vulgaris. C. B. P.
The Walnut

Perfica molli carne, & vulgaris, viridis &
alba. C. B. P. *The Peach-tree*

Pinus fativa. C. B. P. *The Pine-tree*

Pinus sylvestris. C. B. P. *The Wild Pine*
or Pineaster

Populus nigra. C. B. P. *The Black Pop-*
lar. English, In Hedge-rows

Pyrus fativa. C. P. B. *The Pear-tree*

Quercus latifolia, foemina. C. B. P. *The*
Oak-tree. English, In Forests

Salix vulgaris alba, arborescens. C. B. P.
The Willow. English, By the side of Rivers

Suber latifolium, perpetuo virens. C. B. P.
The Cork-tree

Tilia foemina, folio majore. C. B. P.
The Lime-tree

Ulmus Campestris & Theophrasti. C. B. P.
The Elm-tree. English, In Hedge-rows

A short

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A short EXPLANATION of the TECHNICAL WORDS made use of in this WORK, some of which have been inserted in the Body of the WORK; but for the easier turning to them, it has been thought proper to draw them up in this Place together.

A *Caulis* & *Acaulos*, without a Stalk; that is, when the Flower of a Plant grows close to the Ground, having no visible Stalk, as in the *Carlina-thistle*, &c.

Acinus & *Acini*, are the Berries or Fruit of the *Elder*, *Privet*, *Ivy*, &c.

Ala is the Sinus of a Stalk, which the Leaf or Pedicle makes with the Stalk or Branches, from whence a new Offspring is wont to put forth.

Amentaceous Flowers are such as have an Aggregate of Summits hanging down in form of a Rope or Cats-tail; as the male Flowers of the *Mulberry*, the *Hazel*, *Walnut* and *Oak*. These are also called *Iulus*, and in *English*, *Katkins*.

Apetalous Flowers. See *Flos*.

Apices, Summits, are those Bodies which hang upon the Chives or Threads which generally surround the Pointals of Flowers, and contain the prolific Powder, which is analogous to the male Sperm in Animals, as in *Plate III. Fig. 32. b*.

Arbor, a Tree, is defined to be a woody Plant of the largest Growth, whose Trunk is perennial and single, and divided into many large Branches, which are again divided into smaller Twigs, on which the Leaves, Flowers and Fruits are produced.

Arista is that sharp-pointed Needle which stands out from the Husk or Covering of the Grain of *Corn*, *Grass*, &c. and is called *Awn*, or *Beard*.

Articulation is the Connection of Parts that consist of Joints or Knees, such as the Pods of *Birdsfoot*, *French Honeysuckle*, &c. which when ripe, divide into so many Parts, as there are Knees or Joints.

Axis is a taper Column placed in the Centre of some Flowers or Katkins, about which the other Parts are disposed.

Bacca, i. e. a Berry, is a roundish Fruit, for the most part soft, containing one or more Seeds in a pulpy Substance.

Balaustium, is the Cup of the Flower of the *Wild Pomegranate*.

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Barbule are the half Florets of compound Flowers.

Bivalve: the Pods or Husks of Plants, which open lengthways in two Parts, like the Shell of a *Muscle*, are termed *Bivalve*.

Brachia are the Divisions of the large Branches of Trees from the Trunk.

Bulbus, bulbous Roots, are such as consist either of several Coats involving one another, or of several Scales lying one over another. The first of these is called a tunicated Root, (of this Sort is the *Onion*, *Tulip*, &c.) and the last is called a squamous (i. e. a scaly) Root, of which Sort is the *Lily*, *Martagon*, &c.

Calypha is the thin Involucrum or Cover of some Seeds.

Calyx, or Empalement, is generally understood to mean those less tender Leaves, which cover the other Parts of the Flower.

Capillaments in Flowers, are generally understood to mean the Chives which support the *Apices*.

Capitulum is the Head or Top of any Plant.

Capsula is the short Pod or Husk of a Plant containing the Seed.

Carina is the concave Petal or Segment of a Butterfly-flower, which resembles the Keel or lower Part of a Boat.

Caudex is the Trunk of a Tree.

Caulis is a Part of a Plant receiving the Nourishment from the Root, and conveying it into the other Parts with which it is cloath'd, not having one Side distinguishable from the other. The Stalk of a Tree is called the *Trunk*, and in *Corn* and *Grass*, it is called the *Blade*.

Caulis volubilis, a twining Stalk, is that which twists about any Prop without the Help of Tendrils; as the *Hop*, *Kidney-bean*, &c.

Caulis scandens a climbing Stalk, is that which climbs by the Help of Tendrils; as the *Vine*, *Briony*, &c.

Caulis repens, a creeping Stalk, is that which lies on the Ground, and propagates itself

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itself by emitting Roots, as the *Ivy*, *Strawberry*, &c.

Caulis procumbens, a procumbent or trailing Stalk, is that which lies on the Ground without emitting Roots.

Cirri are the little Fibres of the Roots of Plants.

Claviculus, or *Capreolus*, (i. e. Tendrils) is a Part of a Stalk, curling and laying hold on any adjacent Body, and is always produced at a Joint. These are also called *Claspers*.

Coma is the Top of a Branch or Flower.

Conus, i. e. Cone, is the Fruit of the *Pine*, *Fir*, *Cedar*, &c.

Corymbus signifies a Cluster of Flowers or Fruit, standing on Pedicles, which are disposed in such a manner as to form a Sphere; of this Sort is the *Ivy*, &c.

Crena, or crenated Leaves, are such as are cut about the Edges, into several obtuse Segments, as in *Plate I. Fig. 2.*

Cubitus, a Cubit, i. e. a Foot and half; so the Stalks of Plants are termed *Cubitalis*, *Bicubitalis*, &c. according to their Height.

Culmus is the Stalk or Blade of *Corn*.

Cylindrus, i. e. Cylinder, the Fruit of Plants are termed cylindrical, when they resemble a Column.

Cytinus is generally understood to mean the Flowers of the true Pomegranate; but by some Writers the Cups of Flowers which expand after the same manner, are termed *Cytiniformes*.

Denticulatus, i. e. indented; those Leaves of Plants which are cut about the Edges into several Segments more acute than the crenated Leaves, are termed denticulated, as in *Plate I. Fig. 1.*

Digitated Leaves are compound Leaves divided into several Parts, all of which meet together at the Tail, in form of a Hand, as in *Plate II. Fig. 14.*

Discus, i. e. the Disk, is an Aggregate of Florets, forming, as it were, a plain Surface, as in *Plate III. Fig. 10.*

Dissepimentum is the thin Septum, which divides the several Cells in the Fruit of Plants.

Echinus; those Plants or Parts of Plants which are beset very closely with Spines, like a *Hedgehog*, are termed *echinated*.

Emarginatus; those Leaves of Plants which are hollowed at their Extremities, so as to form a Heart, are called emarginated Leaves, as in *Plate I. Fig. 7.*

Embryo is the tender Fœtus of the Plant.

Fimbria, Fringe; those Parts of Plants or Flowers, whose Borders end in small Threads, resembling fringed Linen, are termed *fimbriated*.

Fistulous Plants are such whose Stalks are hollow like a Pipe.

Flos, i. e. a Flower, is the Organs of Generation of both Sexes, adhering to a common Placenta, together with their common Coverings; or of either Sex separately, with its proper Coverings, if it have any.

The Flowers of Plants are distinguished by Botanists in the following Manner:

Flos amentaceus, i. e. amentaceous Flowers; these are such as are termed *Katkins*.

Flos apetalus, i. e. Flowers without Leaves; these are such as have no other Covering to the Parts of Generation but the *Calyx*.

Flos campaniformis is such a Flower as is shaped like a Bell, as in *Plate III. Fig. 19* and *20*. Those Flowers which spread in the Manner of the *Figure 19*. are termed open bell-shap'd Flowers. But those like *Fig. 20*. are called tubulous bell-shap'd Flowers.

Flos caryophyllus is such a Flower as is shaped like a Clove-gilliflower.

Flos compositus is a compound Flower, which is composed either of Florets, as in *Plate III. Fig. 17. a* and *b*; or Semiflorets, as in *Plate III. Fig. 17. c*; or of both together, as in *Plate III. Fig. 17*. Of this Kind is the *Blue-bottle*, *Knapweed*, &c.

Flos cruciformis, i. e. a cross-shap'd Flower, which is composed of Four Petals, placed in form of a Cross, as in *Plate III. Fig. 5* and *32*. Of this Sort is, the *Cabbage*, *Mustard*, *Wallflower*, &c.

Flos flosculosus, i. e. a flosculous Flower, is that which is composed of several Florets; see *Plate III. Fig. 1. a* and *b*, included in one common Cup.

Flos infundibuliformis, i. e. a funnel-shap'd Flower, is that which is shaped like a Funnel, as in *Plate III. Fig. 21*. Of this Kind is the *Primrose*, *lesser Centaury*, &c.

Flos labiatus, i. e. a lip-shap'd Flower; this is an irregular monopetalous Flower, divided commonly into two Lips; the upper Lip is called the Crest, and the under one the Beard. Sometimes the Crest is wanting, and then the Style and Chives supply its Place; this is by some called an unilabiated Flower. See *Plate III. Fig. 36, a b c* and *d*.

Flos liliaceus, i. e. a lily-shap'd Flower, is generally composed of six Petals, which resemble those of the Lily, as in *Plate III. Fig. 35*. Of this Sort is the *Tulip*, *Asphodel*, &c.

Flos monopetalus, i. e. a Flower composed of one Leaf; all those Flowers whose Petals are joined at the Bottom, so that they fall off intire, are termed monopetalous Flowers, as in *Plate III. Fig. 18*.

Flos monopetalus anomalus, i. e. an irregular Flower consisting of one Leaf, as in *Plate III. Fig. 30* and *31*.

Flos papilionaceus, a papilionaceous or pea-bloom Flower, is one which in some measure resembles a Butterfly with its Wings expanded. It always consists of these four Parts; the Standard

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Standard (or *Vexillum*), which is a large erect Segment or Petal; the two Wings (*Alae*), which compose the Sides; and the Keel (*Carina*), which is a concave Petal or Segment resembling the Keel of a Boat; this is sometimes intire, and at other times it consists of two Petals or Segments, adhering pretty close together; see *Plate III. Fig. 6. and 37.* Of this Sort is the *Bean, Pea, Vetch, &c.*

Flos personatus, i. e. a personated Flower, that is, an irregular monopetalous Flower, whose upper Part resembles the Beaks of Fowls, as in *Plate III. Fig. 7 and 27.* Of this Kind is the *Snapdragon, Toad-flax, &c.*

Flos urceolatus, or pitcher-shap'd Flower; of this Sort is the *Arbutus, Whortle-berry, &c.* See *Plate III. Fig. 24.*

Flos petalodes, i. e. a petalous Flower, that is, a Flower whose Organs of Generation are surrounded with Leaves, as in *Plate III. Fig. 13.*

Flos polypetalus, i. e. a polypetalous Flower, that is, a Flower composed of several Leaves. When these agree in Figure and Position, it is called a regular polypetalous Flower; but when the Petals do not agree in Figure and Position, it is called an irregular polypetalous Flower.

Flos radiatus, i. e. a radiated Flower, consists of two Parts; the *Disk*, see *Plate III. Fig. 10.* which is an Aggregate of Florets forming a plain Surface, and the *Rays* (See *Plate III. Fig. 10.*), which are several Semiflorets set round the *Disk*, in form of a Star. These are called radiated discous Flowers; but those which have no such Ray, are called naked discous Flowers.

Flos rosaceus, i. e. a rose-shap'd Flower, that is, a Flower consisting of four or more Petals, which are placed circularly in form of a Rose, as in *Plate III. Fig. 14.*

Flos scorpioides, that is, when the Flowers are ranged on one Side of the Pedicle, which twists at the Top in form of a Scorpion's Tail; of this Sort is the *Heliotropium, &c.*

Flos semistofculosus, i. e. a semistofculosus Flower; this is composed of several Semiflorets, included in one common *Calyx*.

Flos spicatus, i. e. a spiked Flower, is that whose Flowers are set thick on the Pedicle, in such a manner as to form an acute Cone.

Flos stamineus, i. e. a stamineous Flower, is that which is composed of many Chives, included in a *Calyx*, having no Petals; of this Sort is the *Bistort, Sparganium, &c.*

Flos sterilis, barren Flowers; these have no Embryo adhering to them, so are called male Flowers, and false Flowers; of this Kind is the *Melon, Gourd, &c.*

Flos verticillatus, that is, a whorle-shap'd Flower; these Flowers grow closely united, surrounding the Stalk at the several Joints.

Flos umbellatus, i. e. an umbellated Flower, is when the Extremity of the Stalk or Branch is divided into several Pedicles or Rays, beginning from the same Point, and opening in

such a manner as to form a kind of inverted Cone, like an *Umbrella*. When the Pedicles into which the Stalk is divided are subdivided into others of the same Form, upon which the Flowers are disposed; the first Order is called Rays, the second Pedicles. That Umbel which consists of Pedicles only, is called a simple Umbel; that which is composed both of Rays and Pedicles, is called a compound Umbel.

Folium, a Leaf, is a Part of a Plant, extended into Length and Breadth, in such a manner as to have one Side distinguishable from the other. This is called in *Latin Folium*, to distinguish it from the Leaf of a Flower, which is called *Petalum*.

Folium simplex, a simple Leaf, is that which is not divided to the Middle, as in *Plate I. Fig. 1, 2, 3, 4 and 5.*

Folium compositum, a compound Leaf, is that which is divided into several Parts, each resembling a simple Leaf; see *Plate II. Fig. 20 and 21.*

Folium digitatum, a digitated Leaf, is a compound Leaf divided into several Parts, all of which meet together at the Tail so as to resemble a Hand; see *Plate II. Fig. 14 and 15.*

Folium trifoliatum a trifoliated Leaf, is a digitated Leaf consisting of three Fingers, as in *Plate II. Fig. 18.*

Folium trilobatum a trilobated Leaf, consists of three obtuse Lobes, which are not divided to the Bottom; see *Plate II. Fig. 17.*

Folium heptafoliatum, a heptafoliated Leaf, is a digitated Leaf consisting of seven Fingers; see *Plate I. Fig. 10.*

Folium quinquefoliatum, a quinquefoliated Leaf, is a digitated Leaf consisting of five Fingers; see *Plate II. Fig. 15.*

Folium pennatum, a pennated Leaf, is a compound Leaf divided into several Parts, each of which is called a Lobe, placed along the middle Rib, either alternately, (as in *Plate II. Fig. 22.*) or by Pairs (as in *Plate II. Fig. 21.*). When the middle Rib is terminated by an odd Lobe, (as in *Fig. 21.*) it is called an unequal pennated Leaf; and when it is not terminated by an odd Lobe, (as in *Fig. 20.*) it is termed an equal pennated Leaf. When the Lobes are all nearly of the same Form and Bigness, it is called an uniform pennated Leaf; when they are not so, it is termed difform.

Folium alatum, a winged Leaf, is, as it were, composed of several pennated Leaves.

Folium ramosum, a ramose Leaf, is that which is still farther divided than the winged Leaf, as in the common or female Fern.

Cauda, the Tail of a Leaf, is a Production of the middle Rib, and connects the Leaf with the Stalk, after the manner of a Pedicle; when the middle Rib has an Appendix of the Leaf running along it, it is often called a winged Leaf, see *Plate I. Fig. 12.*

Folium integrum, an intire Leaf, is that which has no Division on the Edges, as in *Plate I. Fig. 5.*

Folium

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Folium angulatum, an angular Leaf, is that whose Margin is cut into several Angles, as in Plate I. Fig. 4.

Folium auriculatum, an eared Leaf, is that whose Base next the Pedicle is indented somewhat resembling an Ear, as in Plate I. Fig. 8.

Folium sagittatum, a spear-shap'd Leaf, is that which ends in three sharp Angles resembling a Dart, as in Plate II. Fig. 19.

Folium sinuatum, a sinuated Leaf, is that which is cut about the Edges into several long and large Segments, as in Plate I. Fig. 11.

Folium serratum, a serrated Leaf, is that which is cut about the Edges into several acute Segments like the Teeth of a Saw, as in Plate I. Fig. 6.

Folium crenatum, a crenated Leaf, is that which is cut about the Edges into several obtuse Segments, as in Plate I. Fig. 2.

Folium laciniatum, a jagged Leaf, is that which is cut about the Edges into several deep Portions, in an irregular Manner, as in Plate I. Fig. 13.

Folium umbilicatum, an umbilicated Leaf, is that which has the Pedicle fastened to the Backside of a Leaf, so that on the upper Side of the Leaf, there is a small Cavity formed like a Navel, as in Plate II. Fig. 16.

Folliculus, is a leafy membranaceous Sheath or Covering, which surrounds the Fruit or Seed; as the *Winter-cherry*, &c.

Fornicatus or fornicated Petals, are such Flower-leaves as are arched after the manner of the *Galea*, or Crest, of the *Clary*, *Sage*, &c. as in Plate III. Fig. 36.

Fructus, a Fruit; by the Word Fruit, are to be understood the Seeds of all Plants with their Covering.

Fructus umbilicatus, an umbilicated Fruit, is that which had the other Parts of the Flower growing on its Top when it was an Ovary; they usually form a Cavity, which is known by the Name of the *Umbilicus* or *Navel*; as in the *Medlar*, *Rose*, *Pomegranate*, &c.

Frutex, a Shrub, is a Plant with many woody perennial Trunks, such as *Roses*, *Syringa's*, *Spanish Broom*, &c. which divide into several Stems near the Ground. But the Word is frequently used by Gardeners, for all woody Plants of low Growth.

Geniculum, Knots; such Roots and of Pods Plants, are said to be geniculated as are divided into Joints.

Gluma is the Husk or Chaff of Corn.

Habitus plantæ is the outward Appearance of Plants.

Herba, an Herb; by an Herb are meant, all such Plants whose Stalks die to the Ground every Year. Those whose Roots do not continue longer than one Year, are termed *annual Plants*; those whose Roots continue two Years,

are termed *biennial Plants*; and those whose Roots continue many Years, are termed *perennial Plants*.

Imbricatus; the Leaves or Scales of Plants are said to be imbricated, when they are disposed so as to lie one on the Edge of the other, after the manner of Tyles on a House.

Internodium is that Part of the Stalks of Plants between the Knots or Joints.

Iulus is a Katkin.

Lanugo, Down; the Seeds of Plants which have a downy Substance fastened to them, which serves as Wings to transport them, are termed *lanuginous*; as the *Thistle*, &c.

Loculamenta are the Cells in the Fruit of Plants, where the Seeds are lodged, which are divided by small Partitions.

Locusta is the outer Covering of the Flower and Grain of Corn which incloses the Chaff.

Malleolus, Mallet; the Cuttings of Vines, which are taken with Joints of the old Wood to their Bottom, so as to resemble a little Mallet, are termed *Malleoli*; which Cuttings more certainly take Root than any other, and always make better Plants.

Marginatus, bordered; the Seeds of Plants which have a thin leafy Border round them, are said to be *marginated*; as those of the *Stock-gilliflower*, *Honesty*, &c.

Mucro, a sharp Point; those Leaves or Fruits of Plants, which are terminated in a sharp Point, are termed *mucronated*.

Multicapsular Plants are such as have several Pods of Seeds succeeding each Flower; as the *Celandine*, *Columbine*, &c.

Nucleus, a Kernel, is that Part of the Fruit which is inclosed in a hard Shell; as the Kernel of the *Almond*, *Apricock*, &c.

Officulum, a Shell, is the hard stony Covering of Seeds.

Panícula, a Panicle, is a Stalk diffused into several Pedicles, sustaining the Flowers or Fruits; of this Sort are the *Oat*, *Millet*, &c.

Pappus, Down; see *Lanugo*.

Pediculus, a Pedicle, is that Part of a Stalk which immediately sustains a Leaf, a Flower, or a Fruit; and in *English*, is called *Footstalk*.

Petala, Petals, are the tender fine-coloured Leaves, which are generally the most conspicuous Parts of a Flower; so those Flowers which consist of one Leaf, are called *monopetalous* Flowers; those of two Leaves, are called *bipetalous*; those of three Leaves, *tripetalous*; those of four Leaves, *tetrapetalous*; those of five

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five Leaves, *pentapetalous*; those of six Leaves, *hexapetalous*; and those of a greater Number of Leaves, are termed *polypetalous*.

Pistillum, Pointal or Style, is that Column which occupies the Centre of the Flower, rising on the Top of the Embryo, and is generally surrounded with the Chives; see Plate III. Fig. 3. These differ greatly in their Form; for in some Flowers they are roundish, in others triangular, oval or square.

Placenta is that Part of the Pod or Husk of a Plant, to which the Seeds are fastened, and by which they are nourished till they are ripe.

Planta, a Plant, is an organical Body, destitute of Sense, and spontaneous Motion, adhering to another Body in such a manner as to draw from it its Nourishment; propagating itself by Seed. Under this generical Name, are included *Trees*, *Shrubs*, *Undershrubs* and *Herbs*.

Polypetalous, many Leaves; those Plants are termed *polypetalous*, whose Flowers are composed of several Leaves.

Pomum, an Apple, is generally understood to be any fleshy Vessel containing more Seeds than one; so that all Plants which produce such Fruit, are termed *pomiferous*, i. e. apple-bearing.

Prunum, a Plum, is a fleshy Vessel inclosing a hard brittle Shell, in which is one or two Seeds, so that all Plants which produce such Fruit, are termed *pruniferous*, i. e. plum-bearing.

Pulpa, Pulp, is the soft Part of Fruits which surrounds the Seeds, as in the *Tamarind*, *Cassia*, &c.

Pyramidatus, pyramidal; those Flowers or Fruits which grow in form of a Pyramid, are termed *pyramidal*.

Racemus, a Cluster, is a Stalk divided or branched into several Pedicles, sustaining the Flowers or Fruits thick set together (as in the *Vine*, *Currant*, &c.): the first of these Conditions distinguishes it from a Spike; the last from a Panicle.

Radix, a Root, is that Part of a Plant by which it naturally receives its Nourishment. These are of different Forms and Contextures, some of them being fibrous, others fleshy or woody.

Radix fibrosa, a fibrous Root, is that which consists only of small Fibres like Hairs: of this Sort is *Grass*, *Corn*, &c.

Radix tuberosa, a tuberous Root, is that which consists of an uniform fleshy Substance, and is generally of a roundish Figure: of this Sort is the *Sow-bread*, &c.

Radix bulbosa, a bulbous Root, is that which consists of several Coats involving one another, or of several Scales lying one over another. The first of these is called a tunicated Root; of this Sort are the *Onion*, *Tulip*, *Hyacinth*, &c. (from whence the *French* call all these Sorts of Roots *Onions*); the last is called a squamous

(or scaly) Root; of this Sort are the *Lily*, *Martagon*, &c.

Radix testiculata, a testiculated Root, is a double tuberous Root; for it consists of two Knobs resembling a pair of Testicles; of this Sort are some of the *Orchis*'s.

Radix palmata, a handed Root, is a tuberous Root, divided, as it were, into several Fingers, so as to resemble a Hand; of this Sort is the *Handed-orchis*.

Radix asphodeli, an asphodel Root, is that which is composed of several oblong fleshy Knobs; of this Kind are the *Kingspear*, *Day-lily*, &c.

Radix granulosa, a granulous Root, is a Kind of grumous Root, consisting of many small fleshy Knobs, resembling Grains of *Corn*; of this Kind is the *white Saxifrage*.

Radix grumosa, a grumous Root, is that which consists of many oblong fleshy Knobs, joined to one Centre at the Top; of this Sort is the *Ranunculus*.

Ramus, a Branch, is the Division of a Stalk; in Trees it is often called a Bough.

Semen, a Seed, is that Part of a Plant which is committed to the Earth, in order to obtain a Plant of the like Kind with its Parent Plant, which produced it.

Semen, a Seed, is a Body perfected by the mutual Operation of both Sexes; containing the Rudiment of such Plant as that from which it was taken; so may properly be judged to be analogous to the Egg of an oviparous Animal.

Semen nudum, a naked Seed, is that which has no Covering beside the Empalement remaining upon it till the Time of Vegetation.

Semen papposum, a downy Seed, is that which has a downy Substance like Wool fastened to it, by which it is transported in the Air to a great Distance from the Parent-plant.

Siliqua, a Pod, is a long flat or round membranaceous Vessel, containing one or two Rows of Seeds.

Spica, a Spike, is a Part of a Stalk thick-set with Flowers or Fruit, in such a manner as to form an acute Cone.

Stamina, or Chives, are those slender Threads which encompass the *Style* in the Centre of Flowers, and support the Apices or Summits which contain the male Dust.

Strobilus is the Cone or Fruit of the *Pine-tree*.

Striae, Channels; those Parts of Plants which have small longitudinal Furrows running along them, are termed *striated*.

Stolones, Suckers, are such Shoots of Plants as arise from the Root, and may be taken off with Fibres to them, so as to propagate the *Species* thereby; of this Sort is the *Philbert*, *Fig*, &c.

Suffrutex, Undershrub, is a woody Plant, not gemmiparous; of this Sort are *Thyme*, *Sage*, *Lavender*, &c.

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Salea, Cuttings, are such Parts of a Branch, as when cut off from the Tree, will take Root, if they are planted in the Ground.

Thyrus, a Thyrse, differs from a Spike, in having the Flowers or Fruits set more loosely on it, so that there are Spaces visibly between them.

Tomentum, Flocks, is when the Leaves or Stalks of Plants are covered with a thick Down, as in *Mullein*, &c.

Tracheæ are the Air-vessels in Plants.

Turiones, Buds, are the future Shoots of Plants, which being inoculated into a proper Stock, will produce a Tree of the same Kind with its Parent-plant, from which it was taken.

Vagina, or *Theca*, is the Sheath or Covering of a Bud.

Valvæ, Valves, the Sides of the Pod or Seed-vessel, which, when they open lengthways in two Parts like *Muscles*, *Cockles*, and such Kinds of Shell-fish, are termed bivalve Pods; as in the *Stockgillflower*.

Verticillum, see *Flos verticillatus*.

Vexillum or Standard, see *Flos papilionaceus*.

Vimen is the flexible Shoot of a Tree.

Viticulæ, Runners, are the slender Shoots of Plants, which trail on the Ground, and emit Roots at their Joints so as to propagate; as in *Strawberries*, *Cinquefoil*, &c.

Umbella, see *Flos umbellatus*.

Umbilicus, see *Fructus umbilicatus*.



Pl. 1.



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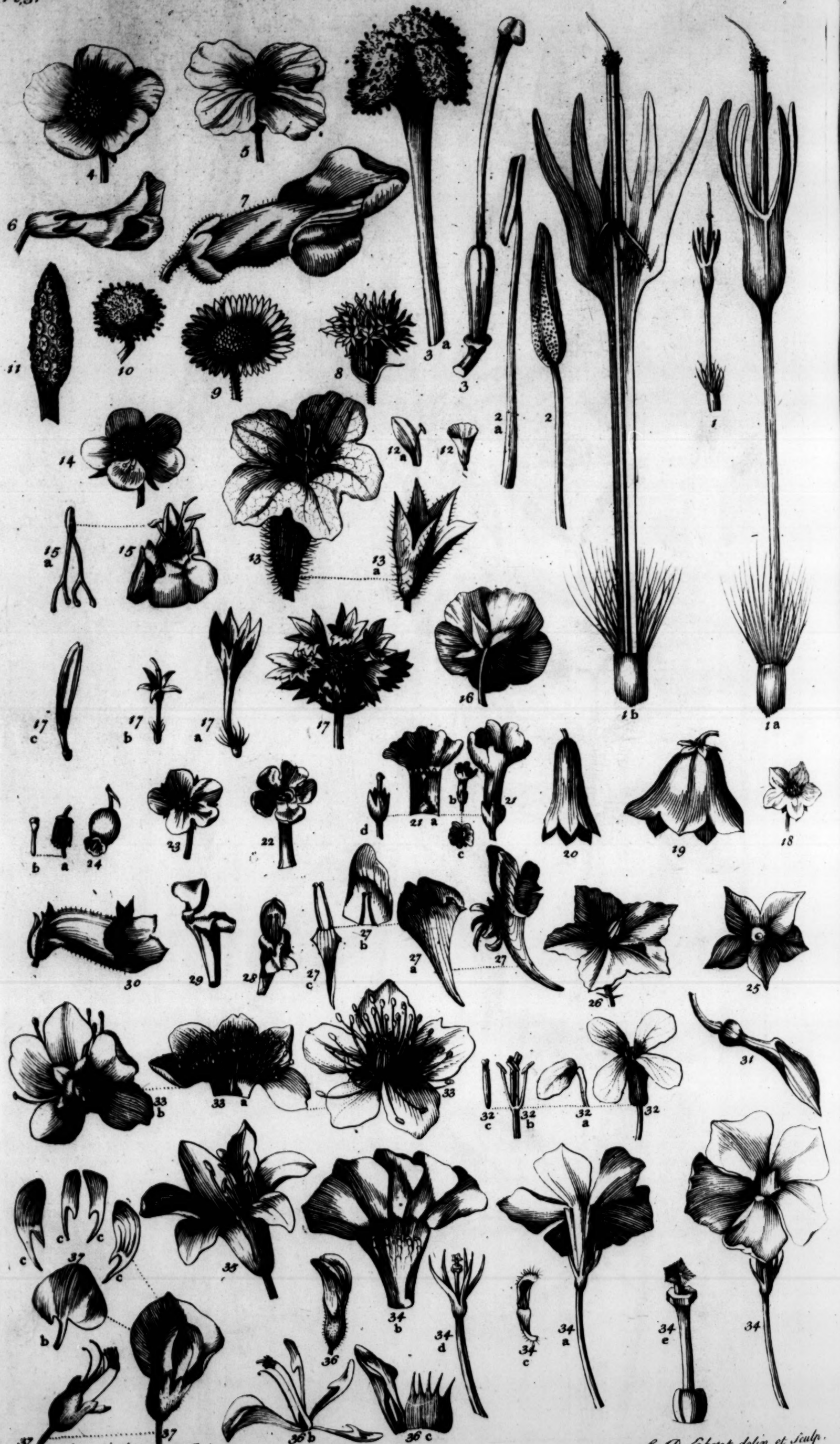
G. D. Chet. Sculp.

Pl. 2.



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G. D. Shret Sculpt.



Place this before the Index.

G. D. Chret, delin. et sculp.



I N D E X

OF THE

ENGLISH Names of all the PLANTS which are mentioned in both Volumes of the Gardeners Dictio- nary, referring to the LATIN Names under which they are treated.

- A
- | | | |
|--|--|---|
| <p>A Bele-tree, <i>see</i> Populus alba</p> <p>Acacia, the true, <i>see</i> Acacia</p> <p>Acacia, the Virginian, <i>see</i> Pseudoacacia</p> <p>Aconite, or Wolfsbane, <i>see</i> Aconitum</p> <p>—— Winter, <i>see</i> Aconitum hyemale</p> <p>Adams-apple, <i>see</i> Aurantium, or Musa</p> <p>Adderswort, or Snakeweed, <i>see</i> Bistorta</p> <p>Adders-tongue, <i>see</i> Ophioglossum</p> <p>Adonis flower, <i>see</i> Adonis</p> <p>African Marygold, <i>see</i> Tagetes</p> <p>Agnus castus, or Chaste-tree, <i>see</i> Vitex</p> <p>Agrimony, <i>see</i> Agrimonia</p> <p>—— Bastard, <i>see</i> Agrimonoides</p> <p>—— Dutch, <i>see</i> Eupatorium</p> | <p>Agrimony Hemp, <i>see</i> Bidens</p> <p>Ague-tree, or Sassafras, <i>see</i> Cornus</p> <p>Alder-tree, <i>see</i> Alnus</p> <p>—— Berry-bearing, <i>see</i> Frangula</p> <p>Alecost, or Costmary, <i>see</i> Balsamita</p> <p>Alehoof, or Ground-Ivy, <i>see</i> Chamæclema</p> <p>Alexanders, or Aliffanders, <i>see</i> Smyrnium</p> <p>Alleluja, or Wood-sorrel, <i>see</i> Oxys</p> <p>Allheal, <i>see</i> Panax</p> <p>—— Clowns, <i>see</i> Sideritis</p> <p>Alleygator Pear-tree, <i>see</i> Persica</p> <p>Alkanet, <i>see</i> Anchusa</p> <p>All-spice, <i>see</i> Myrtus</p> <p>Almond-tree, <i>see</i> Amygdalus</p> <p>—— the Dwarf, <i>see</i> Persica</p> <p>Aloes, <i>see</i> Aloe</p> <p>—— Water, <i>see</i> Aloides</p> <p>Amaranth, <i>see</i> Amaranthus</p> | <p>Amaranth Globe, <i>see</i> Amaranthoides</p> <p>Amber-liquid, <i>see</i> Styrax</p> <p>Amber-tree, <i>see</i> Frutex ambramspirans</p> <p>Ambrosia, <i>see</i> Chenopodium</p> <p>Ameos, or Bishopsweed, <i>see</i> Ammi</p> <p>Amomum Plinii, <i>see</i> Solanum</p> <p>Amoris Pomum, <i>see</i> Lycopersicon</p> <p>Anacardium, <i>see</i> Acajou</p> <p>Anemony, <i>see</i> Anemone</p> <p>—— the Wood, <i>see</i> Anemoneoides</p> <p>Angelica</p> <p>—— the Berry-bearing, <i>see</i> Aralia</p> <p>—— the Tree, <i>see</i> Aralia</p> <p>Anise, <i>see</i> Anisum</p> <p>Anotto, <i>see</i> Mitella</p> <p>Apple, <i>see</i> Malus</p> <p>—— the Mad, <i>see</i> Melongena</p> <p style="text-align: right;">Apple</p> |
|--|--|---|

I N D E X.

- Apple of Love, *see* Lycopersicon
 — the Custard, *see* Guanabanus
 — the male Balsam, *see* Momordica
 — the Paradise, *see* Malus
 — the Sweet, *see* Guanabanus
 — the Sour, *see* Guanabanus
 — the Star, *see* Guanabanus
 — the Fig, *see* Malus
 — the Thorn, *see* Stramonium
 Apricock, *see* Armeniaca
 Archangel, *see* Lamium
 Arrach, or Orrach, *see* Atriplex and Chenopodium
 Arrow-root, *see* Maranta
 Arse-smart, *see* Persicaria
 Artichoke, *see* Cynara
 Asarabacca, *see* Asarum
 Ash-tree, *see* Fraxinus.
 Ash, the Mountain, *see* Sorbus
 Ash, the Spanish, *vide* Arbor Americana, &c.
 Asparagus, or Sperage, *see* Asparagus
 Aspen-tree, *see* Populus Libyca
 Asphodel, *see* Asphodelus
 Asphodel-lily, *see* Lilio-asphodelus
 Avens, *see* Caryophyllata
 Avocada-pear, *see* Persea
 Ax-vetch, *see* Securidaca
 Azarole, *see* Mespilus
- B**
- Balm of Gilead-Pir, *see* Abies
 Balsamine, Female, *see* Balsamina
 — Male, *see* Momordica
 Balsam-tree, *see* Terebinthus
 Balsam of Capevi, *see* Copaiba
 Banana, *see* Musa
 Bane-berries, *see* Christophoriana
 Barbados, flower-fence, *see* Poinciana
 — Cherry, *see* Malpighia
 Barley, *see* Hordeum
 — Naked, *see* Triticum
 Barrenwort, *see* Epimedium
 Basil, *see* Ocimum
 — the Stone, *see* Acinos
 Bastard Dittany, *see* Pseudodictamnus
 Batchelors-button, *see* Lychnis
 — Pear, *see* Solanum
- Baulm, *see* Melissa
 — the Turkey, *see* Moldavica
 — the Molucca, *see* Molucca
 Bay-tree, *see* Laurus
 — the Cherry, *see* Laurocerasus
 — the West Indian, *see* Myrtus
 — the Rose, *see* Nerium and Chamærhododendron
 — the Alexandrian, *see* Ruscus
 Bead-tree, *see* Azedarach
 Beam-tree, the White, *see* Cratægus
 — the Hard, or Hornbeam, *see* Carpinus
 Bean, *see* Faba
 — the Kidney, *see* Phaseolus
 — the Bog, or Marsh-trefoil, *see* Menyanthes
 — Caper, *see* Fabago
 — Trefoil, *see* Cytisus
 — Bean-tree, *see* Corallodendron
 — Bean-tree, the Kidney, *see* Phaseoloides
 Beard, old Man's, *see* Clematitidis
 Bears-breech, *see* Acanthus
 — Ear, *see* Auricula
 — Ear-fanicle, *see* Cortusa
 — Foot, *see* Helleborus
 Bedinjan, or Pottle John, *see* Melongena
 Bedstraw, our Ladies, *see* Galium
 Bee-flower, *see* Orchis
 Beech-tree, *see* Fagus
 Beet, *see* Beta
 Bell-flower, *see* Campanula
 Bells, Canterbury, *see* Campanula
 Bell-flower, the Steeple, *see* Campanula
 — the Peach-leav'd, *see* Campanula
 Bells, the Hair, *see* Hyacinthus
 Bell-pepper, *see* Capsicum
 Belly-ach-weed, *see* Ricinoides
 Belmusk, or Abelmofck, *see* Ketmia
 Benjamin-tree, *see* Arbor Virginiana, &c.
 Bennet-herb, *see* Caryophyllata
 Berberry-bush, *see* Berberis
 Betony, *see* Betonica
 Betony, Pauls, *see* Veronica
 — Water, *see* Scrophularia
 Bethlehem-star, *see* Ornithogalum
- Bifol, or Twyblade, *see* Ophris
 Bilberry, *see* Vitis Idæa
 Bindweed, *see* Convolvulus
 Birch-tree, *see* Betula
 — West Indian, *see* Terebinthus
 Birds-eye, *see* Adonis
 — cherry, *see* Cerasus
 — Foot, *see* Ornithopodium
 — Nest, *see* Daucus vulgaris
 — Pepper, *see* Capsicum
 Birthwort, *see* Aristolochia
 Bishopsweed, *see* Ammi
 Bistort, *see* Bistorta
 Bitter-sweet, *see* Solanum scandens
 Bitterwort, *see* Gentiana
 Blackberry, *see* Rubus
 Black-thorn, *see* Prunus
 Black-briony, *see* Tamnus
 Bladder-nut, *see* Staphylodendron
 Blite, *see* Blitum
 Blood-flower, *see* Hæmanthus
 Bloodwort, *see* Lapathum
 Blue-bottle, *see* Cyanus
 Bolbonach, or white Sattin, *see* Lunaria
 Bombast, or Cotton, *see* Xylon
 Bonanas, or Banana, *see* Musa
 Boorcole, *see* Brassica
 Borage, *see* Borago
 Box-tree, *see* Buxus
 — thorn, *see* Lycium
 Bramble, *see* Rubus
 Brank-urfin, *see* Acanthus
 Brasilleto, *see* Pseudo-fantalum
 Bread, St. John's, *see* Siliqua edulis
 Briar, the Wild, *see* Rosa
 — the Sweet, *see* Rosa
 Briony, *see* Bryonia
 Bristol-flower, *see* Lychnis Chalcidonica
 Brimstone-wort, *see* Peucedanum
 Brocoli, *see* Brassica
 Brooklime, *see* Veronica aquatica
 Broom, the Green, *see* Cytisogenista
 — the Spanish yellow, *see* Genista juncea
 — the white Spanish, *see* Spartium
 — the Butchers, *see* Ruscus
 — rape, *see* Orobanche
 Brownwort, *see* Scrophularia aquatica
 Bruisewort, *see* Lychnis
 Bucks-horn, Plantain, *see* Coronopus
 — horn, Cress, *see* Nasturtium
 — thorn, *see* Rhamnus
 — wheat, *see* Fagopyrum
 Bugle,

I N D E X.

Bugle, *see* Bugula
 Buglois, *see* Buglossum
 — the Vipers, *see* Echium
 Bullace-tree, *see* Prunus
 Bully-tree, *see* Cainito
 Burdock, *see* Lappa
 — the lesser, *see* Xanthium
 Burnet, *see* Pimpinella
 — Saxifrage, *see* Tragofelinum
 Butchers-broom, *see* Ruscus
 Butter bur, *see* Petasites
 Butterfly, Orchis, *see* Orchis
 Butter-wort, *see* Pinguicula
 Button-tree, *see* Conocarpus
 and Platanus

C

Cabbage, *see* Brassica
 — the Sea, *see* Crambe
 — Tree, *see* Palma
 Cadlock, *see* Rapistrum
 Cajou, or Cashew-nut, *see* Acajou
 Calabash, *see* Melopepo
 — Tree, *see* Cuete
 Calamint, *see* Calamintha
 — the Water, *see* Mentha
 Caltha pulustris, *see* Populago
 Caltrops, *see* Tribulus
 Calves-snout, *see* Antirrhinum
 Cammock, *see* Anonis
 Camomile, *see* Chamæmelum
 Camphire-tree, *see* Camphora
 Campion, *see* Lychnis
 Candle-berry-tree, *see* Gale
 Cane, the Bambo, *see* Arundo
 — the Indian flowering, *see* Cannacorus
 — the Dumb, *see* Arum
 — the Sugar, *see* Arundo
 Candy-carrot, *see* Myrrhis
 Candy-tuft, *see* Thlaspi
 Candy-tuft-tree, *see* Thlaspidium
 Canterbury-bell, *see* Campanula
 Caper-bush, *see* Capparis
 — the Bean, *see* Fabago
 Capons-tail-grafs, *see* Gramen
 Caraway, *see* Carui
 Cardinal-flower, *see* Rapuntium
 Carduus, *see* Cnicus
 Carline-thistle, *see* Carlina
 Carlock, *see* Rapistrum
 Carnation, *see* Caryophyllus
 — the Spanish, *see* Poinciana
 Carob, *see* filiqua edulis
 Carrot, *see* Daucus
 — the Deadly, *see* Thapsia
 — the Candy, *see* Myrrhis
 — the Scorching, *see* Thapsia
 Cassada, or Cassavi, *see* Manihot

Cassidony, *see* Stoechas
 — the Mountain, *see* Elichrysum
 — the Golden, *see* Elichrysum
 Cassioberry-bush, *see* Cassine
 Cataputia major, *see* Ricinus
 — minor, *see* Tithymalus
 Catchfly, *see* Lychnis
 Caterpillar, *see* Scorpioides
 Catmint, *see* Cataria
 Cedar, of Bermudas, *see* Juniperus
 — the berry-bearing, *see* Cedrus
 — of Carolina, *see* Juniperus
 — of Goa, *see* Cupressus
 — of Jamaica, *see* Cedrus Barbadiensis
 — of Lebanon, *see* Cedrus
 — of Lycia, *see* Cedrus
 — of Virginia, *see* Juniperus
 — white, *see* Cupressus
 — the Bastard, *see* Guazuma
 Celandine, *see* Chelidonium
 Celery, or Salary, *see* Apium
 Centaury, the greater, *see* Centaurium
 — the lesser, *see* Centaurium
 Ceterach, *see* Asplenium
 Chameleon Thistle, *see* Carlina
 Charlock, *see* Rapistrum
 Charvil, *see* Chærophyllyum
 Chaste-tree, *see* Vitex
 Cheese-runner, *see* Gallium
 Cherry-tree, *see* Cerasus
 — Bay, *see* Laurocerasus
 — Barbados, *see* Malpighia
 — the Bird, *see* Cerasus
 — Laurel, *see* Laurocerasus
 — the Winter, *see* Alkekengi or Solanum
 — the Portugal, *see* Laurocerasus
 — the Cowhage, *see* Malpighia
 — the Cluster black of America, *see* Cerasi similis
 — the Cornelian, *see* Cornus
 Chervil, *see* Chærophyllyum
 — the greater, *see* Myrrhis
 Chesnut-tree, *see* Castanea
 — the Horse, *see* Hippocastanum
 — the Earth, *see* Bulbocastanum
 — the scarlet Horse, *see* Pavia
 Chiches, *see* Cicer
 Chicling, *see* Lathyrus
 Chickweed, *see* Alfine

Chocolate-nut, *see* Cacao
 Christmas-rose, *see* Helleborus
 Christ's-thorn, *see* Paliurus
 Christopher-herb, *see* Christophoriana
 Cicely, *see* Myrrhis
 Cinquefoil, *see* Quinquifolium
 — Bastard, *see* Pentaphylloides
 — Shrub, *see* Pentaphylloides
 Cinnamon, the wild, *see* Arbor baccifera
 Cistus, the Male and Female, *see* Cistus
 — the Dwarf, *see* Helianthemum
 Citron-tree, *see* Citrium
 Citrull, *see* Anguria
 Cives, *see* Cepa
 Clary, the garden, *see* Sclarea
 — the wild, *see* Horminum
 Climber, *see* Clematitis
 Clivers, *see* Aparine
 Cloud-berry, *see* Chamæmorus
 Clover, *see* Trefoil
 — the Snail, *see* Medicago
 Clovegillflower, *see* Caryophyllus
 Clowns-woundwort, *see* Sideritis
 Coast-mary, *see* Balsamita
 Cobnut, *see* Corylus
 Coccigria, *see* Cotinus Coriaria
 Cockscorn, *see* Pedicularis
 — Amaranth, *see* Amaranthus
 Cocksfoot-grafs, *see* Gramen
 Cockshhead, *see* Onobrychis
 Coco-nut, *see* Palma nucifera
 Codlin-tree, *see* Malus
 Codlins and Cream, *see* Chamænerium
 Coffee-tree, *see* Jasminum
 Cole-seed, *see* Napus
 Colewort, *see* Brassica
 — the Sea, *see* Convolvulus
 Colliflower, *see* Brassica
 Coloquintida, *see* Colocynthis
 Coltsfoot, *see* Tussilago
 — the strange, *see* Calicia
 Columbine, *see* Aquilegia
 Comfrey, *see* Symphytum
 — spotted, *see* Pulmonaria
 Confound, the great, *see* Symphytum
 — the middle, *see* Bugula
 — the least, *see* Bellis
 — Sarafins, *see* Virga aurea
 Conval-lily, *see* Lilium Convallium
 Coral-tree, *see* Corallodendron
 Coriander, *see* Coriandrum
 Cork-tree, *see* Suber

Corn-

I N D E X.

Corn-bottle, *see* *Cyanus*
 Corn-flag, *see* *Gladiolus*
 Corn-marygold, *see* *Chrysanthemum*
 Corn-violet, *see* *Venus Looking-glass*
 Corn-fallet, *see* *Valerianella*
 Cornel-tree, *see* *Cornus*
 Cornelian-cherry, *see* *Cornus*
 Costmary, *see* *Balsamita*
 Cotton-plant, *see* *Xylon*
 Cotton-tree, *see* *Xylon*
 — the Silk, *see* *Ceiba*
 Cotton-weed, *see* *Gnaphalium*
 Couch-grass, *see* *Gramen*
 Coventry-bells, *see* *Campanula*
 Cowslip, *see* *Primula veris*
 — of Jerusalem, *see* *Pulmonaria*
 Cows-lungwort, *see* *Verbascum*
 Crab-tree, *see* *Malus*
 Cranesbill, *see* *Geranium*
 Cress, *see* *Nasturtium*
 — the Indian, *see* *Acriviola*
 — Sciatica, *see* *Iberis*
 — the Water, *see* *Sisymbrium*
 — Swines, *see* *Nasturtium*
 — Winter, *see* *Sisymbrium*
 Crimson Grass-vetch, *see* *Nisifolia*
 Crosswort, *see* *Cruciata*
 Cross of Jerusalem, *see* *Lychnis*
 Crowl, the Friars, *see* *Arisarum*
 Crowfoot, *see* *Ranunculus*
 Crow-garlick, *see* *Cepa*
 Crow-flowers, *see* *Lychnis*
 Crown Imperial, *see* *Corona Imperialis*
 Cuckow-flower, *see* *Cardamine*
 Cuckow-pintle, *see* *Arum*
 Cucumber, the garden, *see* *Cucumis*
 — the wild, *see* *Elaterrum*
 Cudweed, *see* *Gnaphalium*
 Cullion, *see* *Orchis*
 Cumin, *see* *Cuminum*
 Currant-tree, *see* *Ribes*
 Custard-apple, *see* *Guanabanus*
 Cypress-tree, *see* *Cupressus*
 — the Summer, *see* *Che-nopodium*
 — the garden, or lavender Cotton, *see* *Santolina*
 — the field, or ground Pine, *see* *Chamaepytis*

D

Daffodil, *see* *Narcissus*
 — Lily, *see* *Lilionarcissus*

Daffodil, the Sea, *see* *Pancratium*
 Daifey, *see* *Bellis*
 — the ox-eye, *see* *Leucanthemum*
 Dames-violet, *see* *Hesperis*
 Dandelion, *see* *Dens leonis*
 Danewort, or dwarf-elder, *see* *Sambucus*
 Darnel, *see* *Lolium*
 Darnel-grass, *see* *Gramen Lolium*
 Date-tree, *see* *Palma*
 — the Indian, *see* *Gujacana*
 Day-lily, *see* *Lilio-asphodelus*
 Dead-nettle, *see* *Lamium*
 Deadly-carrot, *see* *Thapsia*
 Deadly-nightshade, *see* *Belladonna*
 Devils-bit, *see* *Scabiosa*
 Devil-in-a-Bush, *see* *Nigella*
 Diers-weed, *see* *Luteola and Genista tinctoria*
 Dill, *see* *Anethum*
 Distaff-thistle, *see* *Atractylis*
 Dittander, *see* *Lepidium*
 Dittany, *see* *Dictamnus*
 — the white, *see* *Fraxinella*
 — the bastard Pseudo-dictamnus
 Dock, *see* *Lapathum*
 Dodder, *see* *Epithymum*
 Dogbane, *see* *Apocynum*
 Dogberry-tree, *see* *Cornus*
 Dogs-grass, *see* *Gramen*
 Dogs-mercury, *see* *Mercurialis*
 Dogs-tooth, *see* *Dens Canis*
 Dogwood, *see* *Cornus*
 — of Jamaica, *see* *Pseudoacacia*
 — of Virginia, *see* *Cornus*
 Dogs-stones, *see* *Orchis*
 Dogs-tongue, *see* *Cynoglossum*
 Double-leaf, or Twyblade, *see* *Ophris*
 Double-tongue, *see* *Ruscus*
 Dovesfoot-cranesbill, *see* *Geranium*
 Dragons, *see* *Dracunculus*
 Dragon-tree, *see* *Palma*
 Dragon, the wild or tarragon, *see* *Abrotanum*
 Dropwort, *see* *Filipendula*
 — the water, *see* *Oenanthe*
 Ducks-foot, *see* *Anapodophyllon*
 Ducks-meat, *see* *Lenticula*
 Dwale, or Deadly-nightshade, *see* *Belladonna*
 Dwarf-bay, *see* *Thymelia*
 Dwarf-oak, *see* *Quercus*
 Dwarf-almond, *see* *Perfica*

E

Earth-nut, *see* *Bulbocastanum*
 — Pease, *see* *Lathyrus*
 — the African, *see* *Vicia*
 Eglantine, or Sweet-briar, *see* *Rosa*
 Elder-tree, *see* *Sambucus*
 — the dwarf, *see* *Sambucus*
 — the marsh, *see* *Opulus*
 — the Spanish, *see* *Saururus*
 Elecampane, *see* *Helenium*
 Elm-tree, *see* *Ulmus*
 Enchanters-nightshade, *see* *Circæa*
 Endive, *see* *Endivia and Cichorium*
 Eryngo, *see* *Eryngium*
 Eternal-flower, *see* *Xeranthemum, Elichrysum and Amaranthoides*
 Everlasting-pea, *see* *Lathyrus*
 Eyebright, *see* *Euphrasia*

F

Feather-few, or Feaver-few, *see* *Matricaria*
 Feather, the Princes, *see* *Amaranthus*
 Felonwort, *see* *Solanum*
 Felwort, *see* *Gentiana*
 Fennel, *see* *Foeniculum*
 Fennel-hogs, *see* *Peucedanum*
 — Giant, *see* *Perula*
 — Scorching, *see* *Thapsia*
 Fennel-flower, *see* *Nigella*
 Fenugreek, *see* *Fœnum Græcum*
 Fern, *see* *Filix*
 — the sweet, *see* *Myrrhis*
 Fiddlewood, *see* *Citharexylon*
 Field-basil, *see* *Acinos*
 Fig-tree, *see* *Ficus*
 — the arched Indian, *see* *Ficus*
 — the wild, *see* *Ficus*
 — the Indian, *see* *Opuntia*
 — Pharaohs, *see* *Musa*
 — the Infernal, *see* *Argemone*
 Fig-marygold, *see* *Ficoides*
 Figwort, *see* *Scrophularia*
 Filbert, *see* *Corylus*
 Finochia, *see* *Foeniculum*
 Fir-tree, *see* *Abies*
 Flag-corn, *see* *Gladiolus*
 — the sweet-scented, *see* *Calamus*
 — the yellow, *see* *Iris*
 Flax, *see* *Linum*
 — the Toad, *see* *Linum*
 Fleabane, *see* *Conyza*
 Fleawort, *see* *Psyllium*
 Flixweed, *see* *Erysimum*
 Flower-

I N D E X.

Flower-de-luce, *see* Iris and Xiphion
 — gentle, *see* Amaranthus
 — eternal, *see* Xeranthemum
 — everlasting, *see* Elichrysum
 Flower-fence, *see* Poinciana
 Flower, four o' Clock, *see* Jalapa
 Fluellin, *see* Veronica
 Flywort, or Catchfly, *see* Lychnis
 Fools-stones, *see* Orchis
 Fox-glove, *see* Digitalis
 Fox-tail-grass, *see* Gramen
 Framboise or Raspberry, *see* Rubus
 French-cowslip, *see* Auricula
 — lavender, *see* Stœchas
 — marygold, *see* Tagetes
 — mercury, *see* Mercurialis
 — wheat, *see* Fagopyrum
 Friars-cowl, *see* Ariarium
 Fritillary, *see* Fritillaria
 Fumitory, *see* Fumaria
 — bulbous-rooted, *see* Capnorchis
 — bladder, *see* Cysticapnos
 — podded, *see* Capnoides
 Furz, *see* Genista
 Fustick-tree, *see* Morus

G

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 — chaste, *see* Vitex
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 — germander, *see* Teucrium
 — mealy, *see* Viburnum
 — of Life, *see* Thuya
 True-love, *see* Herba-Paris
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 — honeysuckle, *see* Periclymenum
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 — African, *see* Hæmanthus
 — tree, *see* Tulipifera
 — laurel-leav'd, *see* Magnolia
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 Turbith, *see* Thapsia
 Turks-cap, *see* Lilium & Melocactus
 Turkey-balm, *see* Moldavica
 — wheat, *see* Mays
 Turnep, *see* Rapa
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 — chickling, *see* Lathyrus
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 — hatchet, *see* Securidaca
 — horfeshoe, *see* Ferrum
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 — black, *see* Tamnus
 — Spanish arbor, *see* Convolvulus
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 Walnut, *see* Nux juglans
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 — cress, *see* Sisymbrium
 — dropwort, *see* Oenanthe
 — germander, *see* Scordium
 — horehound, *see* Lycopus
 — hemp-agrimony, *see* Biddens
 — lily, *see* Nymphæa
 — parnep, *see* Sium
 — pepper, *see* Perficaria
 Wayfaring-tree, *see* Viburnum
 Weed-diers, *see* Luteola
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 Wheat, *see* Triticum
 — Indian, *see* Mayz
 — cow, *see* Melampyrum
 — buck, *see* Fagopyrum
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 — petty, <i>see</i> Genista
 Whortle-berry, <i>see</i> Vitis Idæa
 Widow-wail, <i>see</i> Chamælaea
 Willow-tree, <i>see</i> Salix
 — herb, <i>see</i> Salicaria
 — French, <i>see</i> Chamænerion
 — wort, <i>see</i> Salicaria
 — sweet, <i>see</i> Gale
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 Wind-feed, <i>see</i> Anemonospermus</p> | <p>Winter-aconite, <i>see</i> Aconitum Hyemale
 Winter-bark, <i>see</i> Arbor baccifera
 Winter-cherry, <i>see</i> Alkekengi and Solanum
 Winter-cress, <i>see</i> Sisymbrium
 Winter-green, <i>see</i> Pyrola
 Witch-hazel, <i>see</i> Ulmus
 Woad, <i>see</i> Iltis
 Wolfsbane, <i>see</i> Aconitum
 Wood-anemone, <i>see</i> Anemonoides
 Woodbine, <i>see</i> Caprifolium
 — dwarf, <i>see</i> Chamæpericlymenum
 — upright, <i>see</i> Chamæcerasus</p> | <p>Woody-nightshade, <i>see</i> Solanum
 Woodroof, <i>see</i> Asperula
 Wood-sage, <i>see</i> Scordium
 Wood-sorrel, <i>see</i> Oxys
 Wormwood, <i>see</i> Absinthium
 Wound-wort, <i>see</i> Vulneraria
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 Abrus, <i>vide</i> Orobus
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 Abutilon
 Acacia
 Acacia Germanorum, <i>vide</i> Prunus sylvestris
 Acacia Virginiana, <i>vide</i> Pseudoacacia
 Acajou
 Acanthium, <i>vide</i> Carduus
 Acanthus
 Acarna, <i>vide</i> Carduus
 Acer
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 Achillea, <i>vide</i> Millefolium
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Angelica

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Angelica baccifera, <i>vide</i> Aralia	Astrantia	Bistorta
Anguria	Atractylis	Blattaria
Anil	Atriplex	Blitum
Anisum	Atriplex baccifera, <i>vide</i> Chenopodium-morus	Bocconia
Anonis	Atriplex olida, <i>vide</i> Chenopodium	Boerhaavia
Anoto, <i>vide</i> Mitella	Avellana, <i>vide</i> Corylus	Bonduc
Anthora, <i>vide</i> Aconitum	Avena	Bontia
Anthyllis leguminosa, <i>vide</i> Vulneraria	Aurantium	Bonus Henricus, <i>vide</i> Chenopodium
Antirrhinum	Auricula urfi	Borbonia
Aparine	Auricula leporis, <i>vide</i> Bupleurum	Borago
Aphaca	Auricula muris, <i>vide</i> Pilosella	Botrys, <i>vide</i> Chenopodium
Apios	Azederach	Branca ursina, <i>vide</i> Acanthus
Apium		Brassica
Apium Macedonicum Fuchsi, <i>vide</i> Sium		Brassica marina, <i>vide</i> Crambe & Convolvulus
Apocynum	B	Brazilleto, <i>vide</i> Pseudosantalum
Aquifolium	Baccifera arbor, &c.	Breynia
Aquilegia	Banisteria	Brunella
Arachidna, <i>vide</i> Vicia	Balaustium, <i>vide</i> Punica	Brunsfelsia
Aralia	Ballote	Bruscus, <i>vide</i> Ruscus
Arbor Americana fraxini foliis, &c.	Balsamina	Bryonia
Arbor baccifera Canariensis, &c.	Balsamina mas, <i>vide</i> Momordica	Buddleia
Arbor baccifera laurifolia aromatica, &c.	Balsamita	Buglossum
Arbor benzoinifera	Bamia moschata, <i>vide</i> Ketmia	Bugula
Arbor, coral. <i>vide</i> Corallo-dendron	Bananas, <i>vide</i> Musa	Bulbocastanum
Arbor crepitans, <i>vide</i> Hura	Baobab	Bulbocodium
Arbor Judæ, <i>vide</i> Siliquastrum	Barba capræ, <i>vide</i> Ulmaria	Buphthalmum
Arbor laurifolia, &c.	Barba Jovis	Bupleuroides
Arbor excelsa	Barbarea, <i>vide</i> Sifymbrium	Bupleurum
Arbor in aqua nascens	Bardana major, <i>vide</i> Lappa	Bursa pastoris
Arbor Virginiana	Bardana minor, <i>vide</i> Xanthium	Butomus
Arbor Zeylanica	Baruce, <i>vide</i> Hura	Buxus
Arbuscula Afra repens	Barleria	
Arbutus	Basella	C
Archangelica, <i>vide</i> Angelica	Basilicum, <i>vide</i> Ocimum	Caapeba
Arctium, <i>vide</i> Lappa	Battatas, <i>vide</i> Solanum	Cabritta, <i>vide</i> Samoloides
Argemone	Bauhinia	Cacalia
Argentaria, <i>vide</i> Pentaphylloides	Becabunga, <i>vide</i> Veronica	Cacalianthemum
Aria Theophrasti, <i>vide</i> Cratægus	Begonia	Cacao
Arisarum	Behen album, <i>vide</i> Lychais	Cachrys
Aristolochia	Behen rubrum, <i>vide</i> Limonium	Cæfalpina
Armeniaca	Belladonna	Cajan, <i>vide</i> Cytisus
Armoracia, <i>vide</i> Cochlearia	Bellis	Cainito
Artanita, <i>vide</i> Cyclamen	Bellis major, <i>vide</i> Leucanthemum	Cajous, <i>vide</i> Acajou
Artemisia	Bellonia	Cakile
Arum	Benzoin	Calaba
Arundo	Berberis	Calamintha
Afarum	Bermudian	Calamintha aquatica, <i>vide</i> Mentha
Asclepias	Bernardia	Calceolus
Ascyrum	Besleria	Calcitrapa, <i>vide</i> Carduus stellatus
Asparagus	Beta	Caltha
Asperugo	Betonica	Caltha palustris, <i>vide</i> Populago
Asperula	Betonica aquatica, <i>vide</i> Scrophularia	Calthoides
Asphodelus	Betonica Pauli, <i>vide</i> Veronica	Camara
Asplenium	Berula	Campanula
Aster	Bidens	Campechia
Asteriscus	Bifolium, <i>vide</i> Ophris	Camphora
Asteroides	Bignonia	Camphorata
Astragaloides	Bihai	Cannabina
Astragalus	Bilingua, <i>vide</i> Ruscus	Cannabis
		Canna Indica, <i>vide</i> Cannacorus
		Cannacorus
		Canella

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cifera, &c.	Chamæcrispavonis, <i>vide</i> Sen-	Conyza
Capillus Veneris, <i>vide</i> Adian-	na spuria	Copaiba
thum	Chamædaphne, <i>vide</i> Ruscus	Corallodendron
Capnoides	Chamædrys	Corchorus
Capnorchis	Chamælea	Coriandrum
Capparis	Chamæmelum	Coriaria
Capparis fabago, <i>vide</i> Fabago	Chamæmespilus, <i>vide</i> Mef-	Corindum
Capraria, <i>vide</i> Samoloides	pilus	Coris
Caprifolium	Chamæmorus	Corispermum
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Cardamine	Chamæriphe, <i>vide</i> Palma hu-	Cornus
Cardiaca	milis	Cornutia
Carduus	Chamærhododendron	Corona fratrum, <i>vide</i> Carduus
Carduus benedictus, <i>vide</i>	Chamærubus, <i>vide</i> Rubus	Corona imperialis
Cnicus	Chamæsyce, <i>vide</i> Tithymalus	Corona solis
Carduus globosus, <i>vide</i> Echi-	Chelidonium	Coronilla
nopus	Chelidonium minus	Coronopus
Carduus fullonum, <i>vide</i> Dip-	Chelone	Coronopus Ruelii, <i>vide</i> Na-
facus	Chenopodio-morus	sturtium
Carduus stellatus	Chenopodium	Cortufa
Carlina	Chondrilla	Cortex Winterantis, <i>vide</i> Bac-
Carob, <i>vide</i> Siliqua edulis	Christophoriana	cifera arbor, &c.
Carpinus	Chrysanthemoides	Corylus
Carthamus	Chrysanthemum	Costus hortensis, <i>vide</i> Balsa-
Carui	Chrysosplenium	mita
Caryophyllata	Cicer	Cotinus
Caryophyllus	Cichorium	Cotonea malus, <i>vide</i> Cydo-
Casia	Cichorium verrucarum, <i>vide</i>	nia
Cassia	Zacintha	Cotoneaster, <i>vide</i> Mespilus
Cassida	Cicuta	Cotula
Cassine	Cicutaria	Corula foetida, <i>vide</i> Chamæ-
Castanea	Cinara	melum
Castanea equina, <i>vide</i> Hippo-	Cineraria, <i>vide</i> Jacobæa ma-	Cotyledon
castanum	rina	Courbaril
Castorea	Circæa	Crambe
Catanance	Cirfium	Crassula
Cataputia major, <i>vide</i> Ricinus	Cistus	Cratægus
Cataputia minor, <i>vide</i> Tithy-	Cistus humilis, <i>vide</i> Helian-	Cratægonon, <i>vide</i> Melampy-
malus	themum	rum
Cataria	Citharexylum	Crista galli, <i>vide</i> Pedicularis
Caucalis	Citreum	Crista pavonis, <i>vide</i> Poinciana
Cedrus conifera, <i>vide</i> Cedrus	Citrullus, <i>vide</i> Anguria	Crithmum
libani	Clematitis	Crocus
Cedrus baccifera	Clinopodium	Crotalaria
Cedrus Barbadiensium	Clutia	Cruciata
Cedrus Bermudiana, <i>vide</i> Ju-	Clymenum	Crupina Belgarum, <i>vide</i> Ser-
niperus	Cnicus	ratula
Cedrus Caroliniana, <i>vide</i> Ju-	Coa	Cucubalus
niperus	Coccygia, <i>vide</i> Cōtinus	Cucumis
Cedrus Virginiana, <i>vide</i> Juni-	Cochlearia	Cucumis afininus, <i>vide</i> Elate-
perus	Cocos, <i>vide</i> Palma	rium
Ceiba	Colchicum	Cucurbita
Celtis	Collinsonia	Cucurbitifera, <i>vide</i> Cuiete
Centaurium majus	Colocasia, <i>vide</i> Arum	Cuiete
Centaurium minus	Colocynthis	Cuminoides
Centinodium, <i>vide</i> Polygonum	Colutea	Cuminum
Cepa	Colutea scorpioides, <i>vide</i> Eme-	Cupressus
Cerasus	rus	Cururu
Ceraso affinis	Coma aurea	Cyanus
Ceratia, <i>vide</i> Siliqua edulis	Commelina	Cyclamen
Cerationæ affinis, <i>vide</i> Cour-	Conocarpodendron	Cydonia
baril	Conocarpus	Cymbalaria, <i>vide</i> Linaria
Cereus	Consolida major, <i>vide</i> Sym-	Cynocrambe, <i>vide</i> Mercurialis
Cerithe	phytum	Cynoglossum
Chærophyllum	Consolida media, <i>vide</i> Bugula	Cynosbatos, <i>vide</i> Rosa
Chamæcerasus	Consolida minima, <i>vide</i> Bellis	Cynosorchis, <i>vide</i> Orchis
Chamæcistus, <i>vide</i> Helianthe-	Consolida regalis, <i>vide</i> Del-	Cyperoides, <i>vide</i> Gramen
mum	phinium	Cyrtocarpus

IX IN DI EN XI

Cysticapnos
Cytisc-genista
Cytifus
Cytifus incanus, *vide* Barba
jovis
Cytifus lunatus, *vide* Medi-
cago

D

Dactylus, *vide* Palma
Dalea
Dalechampia
Damasonium
Datura, *vide* Stramonium
Daucus
Daucus Creticus, *vide* Myrrhis
Delphinium
Dens canis
Dens leonis
Dentaria
Dentillaria, *vide* Plumbago
Diapensia, *vide* Sanicula
Dictamnus
Dictamnus albus, *vide* Fraxi-
nella
Diervilla
Digitalis
Dioscorea
Dipsacus
Dodartia
Doria
Doronicum
Dorstenia
Dorycnium
Douglassia
Draba
Draco arbor, *vide* Palma
Draco herba, *vide* Abrotanum
Draco-cephalon
Dracunculoides, *vide* Ha-
manthus
Dracunculus
Dracunculus hortenſis, *vide*
Abrotanum
Dracunculus pratenſis, *vide*
Ptarmica
Droſion, *vide* Ros folis
Dulcamara, *vide* Solanum

E

Ebulus, *vide* Sambucus
Echinomelocactus, *vide* Me-
locactus
Echinophora
Echinopus
Echium
Elæagnus
Elaterium
Elatine, *vide* Linaria
Elephantopus
Elephas
Elichryſum
Emerus
Empetrum
Endivia
Enula Campana, *vide* Helenium

Ephedra
Ephemerum
Epimedium
Equisetum
Erica
Erica baccifera, *vide* Empe-
trum
Erigeron, *vide* Senecio
Eruca
Erucago
Ervum
Eryngium
Eryſimum
Eſculus, *vide* Quercus
Eſula, *vide* Tichymalus
Euonymoides
Euonymus
Eupatorium
Eupatorium Græcorum, *vide*
Agrimonia
Eupatorium meſue, *vide* Age-
raturum
Euphorbium
Euphraſia

F

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Faba Ægyptia, *vide* Arum
Faba craſſa, *vide* Anacamp-
feros
Faba Græca, *vide* Vicia
Fabago
Fagonia
Fagopyrum
Fagotriticum, *vide* Fagopy-
rum
Fagus
Farfar, *vide* Tuſſilago
Ferrum equinum
Ferula
Fico del Inferno, *vide* Arge-
mone
Ficoidea
Ficoides
Ficus
Ficus Indica, *vide* Opuntia
Filago
Filicula
Filipendula
Filipendula aquatica, *vide*
Oenanthe
Filix
Flammula Jovis, *vide* Clema-
titis
Flos Africanus, *vide* Tagetes
Flos Armeniacus, *vide* Caryo-
phyllus barbatus
Flos cuculi, *vide* Lychnis
Flos Conſtantinopolitanus, *vide*
Lychnis
Flos mirabilis, *vide* Jalapa
Flos paſſionis, *vide* Granadilla
Flos ſolis, *vide* Corona ſolis
Flos trinitatis, *vide* Viola tri-
color
Fœnum Bûrgundiacum, *vide*
Medica
Fœnum Græcum

Fragaria
Frangula
Fraxinella
Fraxinus
Fritillaria
Fritillaria craſſa, *vide* Aſclepias
Frutex lauri foliis, &c.
Frumentum Indicum, *vide*
Mays
Frutex Africanus ambram ſp-
rans
Frutex Æthiopicus, *vide* Clusia
Frutex pavonius, *vide* Poin-
ciana
Fruticulus Africanus
Fuchſia
Fumaria
Fumaria filiquoſa, *vide* Cap-
noides
Fumaria tuberoſa, *vide* Cap-
norchis
Fumaria veſicaria, *vide* Cyſti-
capnos

G

Gale
Galega
Galega nemorenſis, *vide* Oro-
bus
Galeopsis
Gallium
Garidella
Geniſta
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Gentiana
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Geranium
Geſnera
Geum
Gingidium, *vide* Viſnaga
Gladiolus
Gladiolus aquatilis, *vide* Bu-
tomus
Glans terræ, *vide* Lathyrus
Glaſtum, *vide* Hatis
Glaucium
Glaux
Globularia
Glycyrrhiza
Glycyrrhiza ſylveſtris, *vide*
Aſtragalus
Gnaphalium
Gnaphalodes
Goſſypium, *vide* Xylon
Goſſypium arboreum, *vide*
Ceiba
Gramen
Gramen Parnaffi, *vide* Parnaffia
Granadilla
Gratiola, *vide* Digitalis
Groſſularia
Guajacana
Guajacum
Guajava
Guanabanus
Guazuma
Guidonia
Gundelia

H

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H

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 Halicacabum, *vide* Alkekengi
 Halimus, *vide* Atriplex
 Harmala
 Hedera
 Hedera terrestris, *vide* Chamæclema
 Hedypnois
 Hedyfarum
 Heleniastrum
 Helenium
 Helianthemum
 Heliotropium
 Helleboraster, *vide* Helleborus
 Helleborine
 Helleborus
 Helleborus albus, *vide* Veratrum
 Hemerocallis, *vide* Liliium
 Hemionitis
 Hepatica, *vide* Lichen
 Hepatica trifolia
 Heptaphyllum, *vide* Fragaria
 Herba Paris
 Herba Gerardi, *vide* Angelica
 Hermannia
 Hermodactylus
 Hernandia
 Herniaria
 Hesperis
 Hieracium
 Hippocastanum
 Hippoglossum, *vide* Ruscus
 Hippolapathum, *vide* Lappathum
 Hippomarathrum, *vide* Fæniculum
 Hippofelinum, *vide* Smyrnum
 Hippuris, *vide* Equisetum
 Hirundinaria, *vide* Asclepias
 Holosteum, *vide* Lychnis
 Hordeum
 Horninum
 Hottonia
 Hura
 Hyacinthus
 Hyacinthus stellatus
 Hyacinthus tuberosus
 Hydrocotyle
 Hydrolapathum, *vide* Lappathum
 Hydrophyllon
 Hydropiper, *vide* Perficaria
 Hyoscyamus
 Hyoseris
 Hypecoum
 Hypericum
 Hypericum frutex, *vide* Spirea
 Hypocistis
 Hyssopus

I

Jacea
 Jacobæa
 Jalapa
 Jalapa officinarum, *vide* Convolvulus
 Jasminoides
 Jasminum
 Vol. II.

Jasminum Mexicanum, *vide* Bignonia
 Jasminum arboreum, *vide* Plumeria
 Jasminum Perficum, *vide* Lilac
 Iberis, *vide* Lepidium
 Ibisus, *vide* Althæa
 Icaco
 Ilex
 Illecebra, *vide* Sedum
 Impatiens, *vide* Cardamine
 Imperatoria
 Indigo, *vide* Anil
 Inga
 Intybus, *vide* Endivia
 Jonthlapi
 Iris
 Iris bulbosa, *vide* Xiphion
 Iris uvaria, *vide* Aloe
 Isatis
 Isora
 Judaica arbor, *vide* Siliquastrum
 Jujuba, *vide* Zizyphus
 Juncus
 Juncus floridus, *vide* Butomus
 Juniperus
 Justicia

K

Kali
 Kali Ægyptiaca, *vide* Ficoides
 Karatas
 Katsjula kalengu
 Kempfera
 Ketmia
 Keiri, *vide* Leucolum
 Knawel, *vide* Millegrana

L

Lablab, *vide* Phaseolus
 Labrum Veneris, *vide* Dipsacus
 Labrusca, *vide* Vitis
 Laburnum, *vide* Cytisus
 Lachryma Jobi
 Lactuca
 Lactuca agnini, *vide* Valerianella
 Ladanum, *vide* Galeopsis
 Lagopus, *vide* Trifolium
 Lamium
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 Lampfana
 Lantana, *vide* Viburnum
 Lapathum
 Lappa
 Lappa minor, *vide* Xanthium
 Larix
 Laserpitium
 Lathyrus, *vide* Tithymalus
 Lathyrus
 Lavatera
 Lavendula
 Laureola, *vide* Thymelæa
 Lauro affinis, &c.
 Laurocerasus
 Laurotaxa, *vide* Ruscus
 Laurus

Laurus Alexandrina, *vide* Ruscus
 Laurus-tinus, *vide* Tinus
 Ledum
 Lens
 Lentiscus
 Leontopetalon
 Leontopodium
 Leonurus
 Lepidium
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 Leucanthemum
 Leucolum
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 Lichen
 Lignum Campechianum, *vide* Campechiana
 Lignum rorum, *vide* Lauro affinis
 Lignum sanctum, *vide* Guaiacum
 Ligusticum
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 Lilac
 Liliastrum
 Lilio-asphodelus
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 Lilio-hyacinthus
 Lilio-narcissus
 Liliium
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 Liliium Perficum, *vide* Fritillaria
 Liliium Sarniense, *vide* Lilio-narcissus
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 Limon
 Limonium
 Linaria
 Linaria scoparia, *vide* Chenopodium
 Lingua cervina
 Linum
 Linum umbilicatum, *vide* Omphalodes
 Lippia
 Liquidamber, *vide* Styrax
 Lithospermum
 Lobelia
 Lobus echinatus, *vide* Bonduc
 Lonchitis
 Lotus
 Lotus arbor, *vide* Celtis
 Luffa
 Lunaria
 Lupinus
 Lupulus
 Luteola
 Lychnis
 Lycium
 Lycoperficon
 Lycopodium
 Lycopus
 Lyfimachia
 Lyfimachia corniculata, *vide* Onagra
 Lyfimachia galericulata, *vide* Cassida
 Lyfimachia filiquosa, *vide* Chamænerion
 Lyfimachia

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Lyfimachia spicata, vide Salicaria

M

Macaleb, *vide Cerasus*
 Magnolia
 Mahaleb, *vide Cerasus*
 Majorana
 Mala *Aethiopica, vide Melongena*
 Mala Armeniaca, *vide Armeniaca*
 Mala cotonea, *vide Cydonia*
 Mala infana, *vide Melongena*
 Malacoides
 Malpighia
 Malva
 Malva arborea, *vide Althæa*
 Malva rosea
 Malva Veneta, *vide Ketmia*
 Malus
 Malus Armeniaca, *vide Armeniaca*
 Malus aurantia, *vide Aurantia*
 Malus cydonia, *vide Cydonia*
 Malus limonia, *vide Limon*
 Malus Medica, *vide Citreum*
 Malus Persica, *vide Persica*
 Malus Punica, *vide Punica*
 Mamei
 Mancanilla
 Mandragora
 Mangles
 Manihot
 Maranta
 Marrubiastrum
 Marrubium
 Marrubium nigrum, *vide Bal-lote*
 Martynia
 Marum
 Mastichina
 Matricaria
 Mays
 Medica
 Medicago
 Melampyrum
 Melianthus
 Melilotus
 Melissa
 Melo
 Melocactus
 Melochia, *vide Corchorus*
 Melongena
 Melopepo
 Menispermum
 Mentha
 Mentha cataria, *vide Cataria*
 Menthastrum, *vide Mentha*
 Mentzelia
 Menyanthes
 Mercurialis
 Mespilus
 Methonica
 Meum
 Mezereon, *vide Thymelæa*
 Miliun
 Miliun solis, *vide Lithosper-mum*

Millegrana, *vide Herniaria*
 Millefolium
 Milleria
 Mimosa
 Mirabilis Peruviana, *vide Ja-lapa*
 Mitella
 Moldavica
 Molle
 Molluca
 Mollugo
 Moly
 Momordica
 Monbin
 Montia
 Morina
 Morfus diaboli, *vide Scabiosa*
 Morfus gallinæ, *vide Alfine*
 Morfus ranæ, *vide Nymphæa*
 Morus
 Moschatellina
 Muntingia
 Murucua
 Musa
 Muscari
 Muscipula, *vide Lychnis*
 Muscus
 Myagrum
 Myosotis
 Myosurus
 Myrabolanus, *vide Monbin*
 Myrrhis
 Myrtus
 Myrtus Brabantica, *vide Gale*
 Myxa

N

Napellus, *vide Aconitum*
 Napus
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 Narcissus
 Nasturtium
 Nasturtium aquaticum, *vide Sifymbrium*
 Nasturtium Indicum, *vide Acriviola*
 Nepeta, *vide Cataria*
 Nerium
 Nicotiana
 Nigella
 Nigellastrum, *vide Lychnis*
 Nil, *vide Anil*
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 Nummularia
 Nux juglans
 Nux vesicaria, *vide Staphylo-dendron*
 Nymphæa

O

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 Ocymastrum, *vide Lychnis*
 Ocymum
 Oenanthe

Oldenlandia
 Oleander, *vide Nerium*
 Olea
 Olea sylvestris, *vide Elæagnus*
 Omphalodes
 Onagra
 Onobrychis
 Ophioglossum
 Ophris
 Opulus
 Opuntia
 Orchis
 Orellana, *vide Mitella*
 Oreoselinum
 Origanum
 Ornithogalum
 Ornithopodium
 Orobanche
 Orobus
 Oryza
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 Oxylapathum, *vide Lapathum*
 Oxy

P

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 Palma
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 Panicum
 Pancratium
 Papaver
 Papaya
 Parietaria
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 Parnassia
 Paronychia
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 Patientia, *vide Lapathum*
 Pavia
 Pedicularis
 Pelecinus
 Pentaphylloides
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 Peplis, *vide Tithymalus*
 Pepo
 Percepier, *vide Alchimilla*
 Pereskia
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 Periclymenum
 Periploca
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 Persicaria
 Pervinca
 Petasites
 Petiveria

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 Phalangium
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 Phaseolus
 Phellandrium
 Phillyrea
 Phlomis
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 Phytolacca
 Pilosella
 Pimpinella
 Pimpinella saxifraga, *vide* Tragofelinum
 Pinafter, *vide* Pinus
 Pinguicula
 Pinguin, *vide* Karatas
 Pinus
 Piper Indicum, *vide* Capsicum
 Pishamin, *vide* Guajacana
 Pisonia
 Pistachia, *vide* Terebinthus
 Pistolochia, *vide* Aristolochia
 Pisum
 Pisum cordatum, *vide* Corindum
 Pittonia
 Plantago
 Platanus
 Plinia
 Plumbago
 Plumeria
 Pneumonanthe, *vide* Gentiana
 Podagraria, *vide* Angelica
 Poinciana
 Polemonium
 Polium
 Polyacanthus, *vide* Carduus
 Polygala
 Polygonatum
 Polygonum
 Polypodium
 Poma amoris, *vide* Lycopersicon
 Pomum Adami, *vide* Auran-tium
 Populago
 Populus
 Porrum
 Portulaca
 Potentilla, *vide* Pentaphyl-loides
 Primula veris
 Prunella, *vide* Brunella
 Prunus
 Pseudo-acacia
 Pseudo-dictamnus
 Pseudo-narcissus, *vide* Narcissus
 Pseudo-santalum
 Psyllium
 Ptarmica
 Pulegium
 Pulmonaria
 Pulsatilla
 Punica
 Pyracantha, *vide* Mespilus
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Q

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R

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 Rapistrum
 Rapunculus
 Rapuntium
 Rauwolfia
 Refeda
 Rhabarbarum, *vide* Lapathum
 Rhagadiolus
 Rhamnoides
 Rhamnus
 Rhodia radix, *vide* Anacamp-feros
 Rhus
 Rhus myrtifolia, *vide* Coriaria
 Ribes
 Ricinoides
 Ricinus
 Rivina
 Rocambole, *vide* Allium
 Rojoc
 Rondeletia
 Rosa
 Rosa hiericointea, *vide* Thlaspi
 Rosa Sinensis, *vide* Kermitia
 Rosmarinus
 Ros folis
 Rubeola
 Rubia
 Rubus
 Ruellia
 Ruscus
 Ruta
 Ruta canina, *vide* Scrophu-laria
 Ruta muraria
 Ruyschiana

S

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 Salicornia
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 Sanguis draconis, *vide* Palma
 Sanicula
 Santolina
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 Saponaria, *vide* Lychnis
 Sapota

Sarracena
 Satureia
 Saururus
 Saxifraga
 Saxifraga aurea, *vide* Chrysosplenium
 Scabiosa
 Scandix
 Scilla
 Sclarea
 Scolymus
 Scordium
 Scorodonia, *vide* Scordium
 Scorpioides
 Scorzonera
 Scrophularia
 Scutellaria, *vide* Cassida
 Secale
 Securidaca
 Sedum
 Selinum, *vide* Sium
 Senecio
 Senna
 Senna spuria
 Serjania
 Serpentaria, *vide* Aristolochia
 Serpyllum
 Serratula
 Sefamum, *vide* Digitalis
 Sefeli
 Sefeli Æthiopicum, *vide* La-serpitium
 Sefeli officinarum, *vide* Siler
 Sefeli pratense, *vide* Silaum
 Sherardia
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 Sideritis
 Sideritis arvensis, *vide* Gale-opfis
 Silaum
 Siler
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 Siliqua sylvestris, *vide* Sili-quastrum
 Siliquastrum
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 Sifyrinchium
 Sium
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 Solanum
 Solanum lethale, *vide* Bella-dona
 Solanum racemosum, *vide* Phytolacca
 Solanum vesicarium, *vide* Al-kekengi
 Soldanella
 Soldanella maritima, *vide* Con-volvulus
 Sonchus
 Sophia, *vide* Erysimum
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 Sorgum, *vide* Milium
 Spartium
 Spartium Hispanicum, *vide*
 Genista
 Speculum Veneris, *vide* Cam-
 panula
 Spergula
 Sphondylium
 Spina acida, *vide* Berberis
 Spina alba, *vide* Mespilus
 Spina infectoria, *vide* Rhamnus
 Spinachia
 Spinachia fragifera, *vide* Che-
 nopodio-morus
 Spiræa
 Stachys
 Staphyllodendron
 Staphysagria, *vide* Delphinium
 Statice
 Stœchas
 Stramonium
 Stratiotes, *vide* Aloides
 Strychnodendron, *vide* Sola-
 num
 Styrax
 Suber
 Succisa, *vide* Scabiosa
 Suriana
 Symphytum
 Syringa

T

Tabernemontana
 Tacamahaca
 Tagetes
 Tamarindus
 Tamariscus
 Tamnus
 Tanacetum
 Tapia
 Taraxacon, *vide* Dens leonis
 Taxus
 Telephioides
 Telephium
 Telephium vulgare, *vide* Ana-
 campseros
 Terebinthus
 Ternatea
 Tetragonocarpos
 Teucrium
 Thalictrum
 Thapsia
 Thapsus-barbatus, *vide* Ver-
 bascum
 Thlaspi
 Thlaspi bicutatum, *vide* Thla-
 spidium
 Thlaspi clypeatum, *vide* Jon-
 thlaspi
 Thlaspi fruticosum, *vide* Alyf-
 son
 Thlaspi umbellatum, *vide* Na-
 sturtium

Thlaspidium
 Thora, *vide* Aconitum
 Thuja
 Thymbra
 Thymelæa
 Thymus
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 Tilia
 Tinus
 Tithymaloides
 Tithymalus
 Tordylium
 Tormentilla
 Tota bona, *vide* Chenopodium
 Toxicodendron
 Trachelium
 Tragacantha
 Tragia
 Tragopogon
 Tragorchis, *vide* Orchis
 Tragofelinum
 Tribulus
 Trichomanes
 Trifolium
 Trifolium acidum, *vide* Oxys
 Trifolium argentatum, *vide*
 Cytisus
 Trifolium fruticosum, *vide*
 Dorycnium
 Trifolium cochleatum, *vide*
 Medica
 Trifolium falcatum, *vide* Me-
 dicago
 Trifolium paludosum, *vide*
 Meninthes
 Trifolium halicacabum, *vide*
 Vulneraria
 Trifolium spinosum, *vide* Fa-
 gonia
 Triosteospermum
 Tripolium, *vide* Aster
 Triticum
 Triticum Indicum, *vide* Mays
 Triticum vaccinum, *vide* Me-
 lampyrum
 Triumphetta
 Tulipa
 Tulipifera
 Tunica, *vide* Caryophyllus
 Turbith, *vide* Convolvulus
 Turnera
 Turritis
 Tussilago

V

Vaccaria, *vide* Lychnis
 Vaccinia, *vide* Vitis Idæa
 Valeriana
 Valeriana Græca, *vide* Pole-
 monium
 Valerianella
 Vanilla
 Veratrum
 Verbascum

Verbasculum, *vide* Cyanus &
 Primula veris
 Verbena
 Veronica
 Viburnum
 Viburnum Americanum, *vide*
 Camara
 Vicia
 Vicia lutea, *vide* Aphaca
 Vincetoxicum, *vide* Asclepias
 Viola
 Viola aquatica, *vide* Hottonia
 Viola hyemalis, *vide* Hesperis
 Viola Indica, *vide* Acriviola
 Viola lunaria, *vide* Lunaria
 Viola mariana, *vide* Campanula
 Viola matronalis, *vide* Lunaria
 Viola Peruviana, *vide* Jalapa
 Viorna, *vide* Clematidis
 Virga aurea
 Virga sanguinea, *vide* Cornus
 fœmina
 Viscum
 Vismaga
 Vitex
 Vitis
 Vitis alba, *vide* Bryonia
 Vitis nigra, *vide* Tamnus
 Vitis Idæa
 Ulmaria
 Ulmus
 Umbilicus Veneris, *vide* Coty-
 ledon
 Unifolium, *vide* Smilax
 Volubilis, *vide* Convolvulus
 Urtica
 Urtica iners, *vide* Galeopsis
 Urtica aculeata, *vide* Canna-
 bina
 Urtica mortua, *vide* Lamium
 Urucu, *vide* Mitella
 Uva crispa, *vide* Grossularia
 Uva urfi
 Vulneraria
 Vulvaria, *vide* Chenopodium

X

Xanthium
 Xanthoxylum
 Xeranthemum
 Ximenia
 Xiphion
 Xylon
 Xylosteon
 Xyris, *vide* Iris

Y

Yerva mora, *vide* Arbot bac-
 cifera Canariensis
 Yucca

Z

Zacintha
 Zingiber
 Ziziphus

F I N I S.